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ROYAL COMMISSION OF INQUIRY INTO CERTAIN  
DEATHS AT THE HOSPITAL FOR SICK CHILDREN AND  
RELATED MATTERS.

Hearing held in Court Room 20  
Court House  
361 University Avenue  
Toronto, Ontario

The Honourable Mr. Justice S.G.M. Grange

Commissioner

P.S.A. Lamek, Q.C.

Counsel

E.A. Cronk

Associate Counsel

Thomas Millar

Administrator

Transcript of evidence  
for

July 26th, 1983

VOLUME 16

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Avenue, Toronto, Ontario, on  
Tuesday the 26th day of July,  
1983.

- - - -

THE HONOURABLE MR. JUSTICE S.G.M. GRANGE - Commissioner  
THOMAS MILLAR - Administrator  
MURRAY R. ELLIOT - Registrar


- - - -

APPEARANCES:

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	Nurses' Association of Ontario
	and 35 Registered Nurses at
	The Hospital for Sick Children

(Cont'd)





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APPEARANCES: (Continued)

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S. LABOW	Counsel for Mr. & Mrs. Gosselin, Mr. & Mrs. Gionas, Mr. & Mrs. Inwood, Mr. & Mrs. Turner, Mr. & Mrs. Lutes and Mr. & Mrs. Murphy (parents of deceased children)
W.W. TOBIAS	Counsel for Mr. & Mrs. Hines, (parents of deceased child Jordan Hines)
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/BB/ak

1  
2 ---Upon commencing at 10:00 a.m.

3 THE COMMISSIONER: Yes, Mr. Lamek.

4 MR. LAMEK: Mr. Commissioner,  
5 before I ask Dr. Rowe to come back to the witness  
6 box, there are a couple of housekeeping matters if I  
7 may.

8 On Thursday last week we marked as  
9 Exhibit 92 the Hospital Record of Frank Fazio and  
10 over the course of the weekend reading that record,  
11 in a country retreat, I discovered that a lot of  
12 the pages were out of sequence, particularly the  
nursing records in the first 50 pages.

13 I have had those redone,  
14 Mr. Commissioner, and copies of the properly  
15 pagenated and order pages have been distributed to  
16 counsel and I wonder if I could substitute for the  
17 old Exhibit 92 the present one which indeed will make  
more sense and will be easier reading for you, sir.

18 THE COMMISSIONER: Yes. I take it  
19 there will be no objection to that.

20 MR. LAMEK: I have just handed to  
21 Mr. Elliot the new one.

22 Next, Mr. Commissioner, I will be  
23 moving today to a number of deaths which I understand  
24 Dr. Rowe to have reviewed, first at a time shortly  
25





1  
2 after Nurse Nelles had been arrested and digoxin  
3 poisoning, at least of certain babies, was suggested  
4 and alleged and, as I understood him on Thursday,  
5 he reviewed later, after Nurse Nelles had been  
6 discharged and certain information was available from  
7 the evidence taken at the Preliminary Inquiry, as  
8 to the digoxin levels recorded in certain post mortem  
9 samples of blood and tissue taken from certain  
10 children.

11 If I understood him aright, it would  
12 follow that information as to digoxin levels, which  
13 was known to or available to Dr. Rowe at the time of  
14 those later reviews, may become relevant to the  
15 consideration of those deaths in the course of his  
16 evidence today and this week.

17 The sources of the information as I  
18 understand it were, and I will ask Dr. Rowe to  
19 confirm this, first, the medical records of the  
20 particular children, and you will recall, sir, that  
21 the Biochemistry report section in the medical charts  
22 does contain reported digoxin levels on samples  
23 submitted to the Biochemistry Department.

24 Second, there were I understand  
25 available within the Hospital, either the originals or  
copies of Dr. Ellis' so-called digoxin books in which







1  
2 he recorded daily the digoxin assay results obtained  
3 in samples sent to the Biochemistry Department.

4 Now, those digoxin books, sir, are  
5 included among the exhibits at the Preliminary  
6 Inquiry in the Queen against Nelles and they are  
7 contained in Volume 2 of the three binders which  
8 were prepared by Commission staff and they are, in  
9 particular, Item 46, Exhibit 46 in the Preliminary  
10 covering the period October 17, '79 to January 12,  
11 1981; Exhibit 45 from the Preliminary covering the  
12 period January 13, 1981 to March 24, 1981 and,  
13 finally, Exhibit 48 of the Preliminary covering the  
14 period March 25, '81 to January 18, '82.

15 And thus, sir, those digoxin  
16 assay results conducted in the Hospital in the  
17 period from October 1979 to January of 1982 are  
18 already before the Commission.

19 THE COMMISSIONER: I'm sorry, just  
20 a moment though. Exhibit 48 is March 25, '81?

21 MR. LAMEK: To January 18, '82.  
22 It just covers the last six days of the period we  
23 are interested in.

24 THE COMMISSIONER: Oh, I see, all  
25 right.

Was there a child...







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MR. LAMEK: No, there was not, but I don't know what the results may have been recorded in the time.

5

6

THE COMMISSIONER: Yes. Yes, all right.

7

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MR. LAMEK: Nevertheless, those are the digoxin books. They are in the Preliminary Inquiry exhibits, Mr. Commissioner, they are before you.

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The third source of information that was available to Dr. Rowe, and certainly from the spring of 1982, was the evidence as to digoxin levels contained in the testimony taken at the Preliminary Inquiry and, sir, the evidence from that source is summarized in Appendix No. 3 to the report of Dr. Bain on his review. That begins at page 41. Dr. Bain had apparently culled from the testimony of the Preliminary Inquiry ---

18

19

THE COMMISSIONER: That is an exhibit also, is it not?

20

21

MR. LAMEK: Yes, Dr. Bain's review is...

22

23

24

25

THE COMMISSIONER: 48?

MR. LAMEK: 48, thank you. And page 41 of that report, sir, Appendix 3 is information





1  
2 drawn by Dr. Bain or by someone assisting him at the  
3 Hospital from the Preliminary Inquiry going to the  
4 assay results obtained by Mr. Cimbura in various  
5 samples submitted to him at the Centre for Forensic  
6 Sciences.

7 Those digoxin levels relate to  
8 samples of blood and/or tissue taken from Justin  
9 Cook, Janice Estrella, Jordan Hines, Christine Inwood,  
10 Stephanie Lombardo, Allana Miller and Kevin Pacsai.

11 Now, Mr. Commissioner, as you know,  
12 I propose to recall Mr. Cimbura and Dr. Ellis to  
13 give evidence as to the particular digoxin assay  
14 results that they obtained from samples from some of  
15 these children and they will no doubt be cross-examined  
16 at that time as to their methodology.

17 I shall do that. But it seems to me  
18 that to continue the examination of Dr. Rowe without  
19 having all the assay results which were then available  
20 clearly before the Commission at first hand would be  
21 unrealistic and I therefore propose to ask at this  
22 point that you accept, sir, as exhibits the digoxin  
23 assay results from the Centre for Forensic Sciences  
24 on my undertaking to call Mr. Cimbura later with  
25 respect to those reports.

Now, I recognize that the results







1  
2  
3 may be challenged, not only on the basis of the  
4 methodology from which they were obtained, but perhaps  
5 more important on the basis of how they should be  
6 interpreted.

7 They contain the digoxin data that  
8 were before, or that were available to Dr. Rowe at  
9 the time he did his enquiry and, in my submission,  
10 to continue his evidence without disclosure of all  
11 the dig level information would be somewhat  
12 artificial.

13 Now, there is perhaps a breaking  
14 point in the reports of the Centre for Forensic  
15 Sciences.

16 I have, Mr. Commissioner, a bundle  
17 of reports. First, a 14-page report dated January  
18 11, 1982, and I can identify that in some more detail  
19 if it becomes necessary to do so, then a two-page  
20 report dated February 2nd, 1982, a three-page report  
21 dated March 25th, 1982 and a one-page report of  
22 April 6th, 1982.

23 Now, those are all the reports which  
24 were apparently delivered by the Centre prior to the  
25 end of the Preliminary Inquiry in the Queen against  
Nelles. There are two subsequent reports dated  
respectively September 29, 1982. That is a six-page  
report and, finally, a two-page report dated  
December 31, 1982.

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But because those reports were not referred to and the levels contained in them were not referred to in the Preliminary, it is unlikely that Dr. Rowe would have had access to that information. Therefore, perhaps for the present, Mr. Commissioner, I should detach the final two reports and ask that you accept for now the reports dated up to April of 1982.

THE COMMISSIONER: As one exhibit or as separate exhibits?

MR. LAMEK: I think they could go in as one exhibit, Mr. Commissioner.

THE COMMISSIONER: With perhaps different letters?

MR. LAMEK: Yes, I have copies for others. Just let me detach the last two.

THE COMMISSIONER: 95-A, January the 11th; B, February the 2nd; C, March 25th, 1982; D, April the 6th, 1982. Have counsel got copies of these yet or not?

MR. LAMEK: They do not, Mr. Commissioner. I have them now.

THE COMMISSIONER: What about these later two, are they going to be ---

MR. STRATHY: Before they are all taken apart, I wonder even though Mr. Lamek is only going to







B.2

1  
2 put in the first four reports, whether we could also  
3 have copies of the subsequent two even though they  
4 are not going to be marked as exhibits at this point.

5 MR. LAMEK: Maybe, Mr. Commissioner,  
6 I could mark the whole bundle but only as Dr. Rowe  
7 got information containing the first four. I am content  
8 to mark the whole bundle.

9 THE COMMISSIONER: All right, well  
10 then, let us make them 95-E and 95-F; 95-E is  
11 September 29th, 1982, and 95-F is December 31st, 1982.

12 --- EXHIBIT NO. 95-A: Document entitled "Report  
13 of the Centre of Forensic  
14 Sciences" dated January 11th,  
15 1982.

16 --- EXHIBIT NO. 95-B: Document entitled "Report  
17 of the Centre of Forensic  
18 Sciences" dated February 2nd,  
19 1982.

20 --- EXHIBIT NO. 95-C: Document entitled "Report  
21 of the Centre of Forensic  
22 Sciences" dated March 25,  
23 1982.

24 --- EXHIBIT NO. 95-D: Document entitled "Report  
25 of the Centre of Forensic  
Sciences" dated April 6th,  
1982.

--- EXHIBIT NO. 95-E: Document entitled "Report  
of the Centre of Forensic  
Sciences" dated September 29th,  
1982.

--- EXHIBIT NO. 95-F: Document entitled "Report  
of the Centre of Forensic  
Sciences" dated December 31,  
1982.





B.3

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THE COMMISSIONER: Yes, all right.

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MR. LAMEK: Now, Mr. Commissioner,  
may I ask Dr. Rowe to come back to the witness box,  
please.

5

6

DR. RICHARD DESMOND ROWE, Resumed

7

8

MR. SCOTT: Mr. Commissioner, just  
before we begin, I just want to be clear about one  
matter.

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I have no objection to these reports  
being marked subject to proof, which I understand is  
the way they are advanced, and I have no objection to  
Dr. Rowe being asked questions about them, whether he  
was aware of them and so on and whether he ever gave  
an opinion on the basis of them or whether he can now  
give an opinion on the basis of them. But I do not  
accept unchallenged my friend's assertion that he  
should necessarily be able to answer those questions.  
He may or may not be able to, depending on whether he  
did an investigation.

19

20

21

22

I think there is a missing element  
here to which my friend has not adverted, but I will  
allow the evidence to bring it out. If we can all  
wait for cross-examination, which looks as if it will  
be in 1984 now.

23

24

THE COMMISSIONER: Well, I am hoping it  
will be as soon as we get back.

25







B.4

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I do not know whether you and  
Mr. Ortved want to -- I think the arrangement was that  
you would go first and last.

5

6

7

MR. SCOTT: Well, before we even get  
to cross-examination, I wrote to Mr. Lamek yesterday  
and there is a matter that I would like him to deal  
with in some fashion.

8

9

10

11

12

THE COMMISSIONER: Yes. Maybe we  
can deal with that before the issue comes up, but  
would you and Mr. Ortved like to or not like to have  
your first cross-examination if we have time this  
week, or would you rather wait until we come back?

13

14

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18

MR. SCOTT: Well, the cross-examination  
that I contemplate is going to take more than a day.  
I mean, we have to go through each of these cases  
because of the pejorative questioning formula that my  
friend has used. So I do not really care when it  
begins, but I would like to continue if we could  
without interruption.

19

20

THE COMMISSIONER: There is no  
question that it will begin, then, after we come back.

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MR. SCOTT: But I would like the  
Commission and my friend to deal with the matter  
referred to in my letter, which I think is of some  
substance.





B.5

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THE COMMISSIONER: Yes. Yes, all

3

right, Mr. Lamek.

4

DIRECT EXAMINATION BY MR. LAMEK (CONTINUED):

5

Q. Dr. Rowe, when we ended last

6

week, we had covered all the deaths to December 31,

7

1980, save only that of the child who died on June 30,

8

and I want to come back to that, but all the deaths

9

which had been reviewed by you for the meeting of

10

January 12, 1981, you will recall.

11

Before we move on, Dr. Rowe, to the

12

deaths in 1981, may I show to you, please, a copy of

13

what appears to be a memorandum from you dated

14

January 5, 1981. The subject is stated as "Mortality

15

Rates - Cardiology" and it is confirming the meeting

16

of January 12, and to it are attached some nine pages

17

of manuscript notes and tables. May I ask, first,

18

if you recognize the memorandum and the attachments?

19

A. Yes, I do.

20

Q. And were the notes prepared by you,

21

Dr. Rowe?

22

A. Most of the notes were prepared

23

by me. Some of the notes were added to by Dr. Jedeikin,

24

who was assisting me in the review.

25

MR. LAMEK: Thank you. Might that be

the next exhibit, please, Mr. Commissioner?







B.6

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THE COMMISSIONER: 96.

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--- EXHIBIT NO. 96: Memorandum and Attachments  
entitled "Mortality Rates -  
Cardiology" from Dr. Rowe,  
dated January 5, 1981.

4

5

6

MR. LAMEK: Q. Doctor, do you have  
a copy of that memorandum available to you?

7

A. Yes, I do.

8

Q. With the attachments?

9

10

A. I do not know that I have the  
first page. Perhaps I should take your copy. Thank  
you.

11

12

13

Q. Just a couple of things that I  
would like to clarify about that before we go any  
further.

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The covering memorandum speaks for  
itself, and you have already told us who was present  
at the meeting. On the first page of the handwritten  
notes, Dr. Rowe, headed "Assemble Deaths, 4 A/B,  
Diagnoses, Etc.", were these prepared as sort  
of notes for chairing the meeting, as it were, or was  
this your thoughts as to how the meeting might go when  
it was first suggested?

21

22

A. I cannot recall. I think it  
probably was more toward the end of the ---

23

24

25

Q. In preparation for the meeting?





B.7

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2

A. I think so.

3

Q. The note reads:

4

"Clarify causes of death, e.g.

5

progression due to severity of

6

malformation ... "

7

I take that to be, and we have talked about that, of  
course:

8

" ... associated defects (ECM)."

9

Can you tell me to what that refers?

10

A. It is short for extracardiac

11

malformations, meaning other anomalies that the child  
is born with which might have had some effect on the  
outcome.

13

14

Q. Might have had a debilitating  
effect on the child or something of that sort?

15

16

A. Or like a cleft palate problem  
with mucus and a difficulty with secretions and  
plugging of tubes and so on.

17

18

19

Q. All right, and then other things  
that we have looked at, which are bracketed together, that  
is to say, infection, failure and cardiorespiratory arrest  
bracketed together and called preventable aspects.

20

21

Can you explain to me what you meant by calling those  
things preventable aspects?

22

23

A. Well, I think that the approach

24

25







B.8.

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there was that one would hope to be able to optimize

3

the treatment for heart failure. If there were

4

infection present, one would hope to be able to

5

appropriately select antibiotics, if possible,

6

obviously not with some infections, particularly viral

7

infections, and through combinations of those and

8

perhaps other points, one might be able to avoid a

9

patient to arrest.

10

Q. Just below that, your next

11

heading appears to be "Identification of needs", and

12

as of this date, what were the needs that you had

identified?

13

A. I would have to look at my

14

notes of the meeting because that is a pretty bare

outline, of course.

15

Q. Are you referring to the type

16

of minute that we have marked as an exhibit, Doctor?

17

A. I am referring to the type of

18

minutes which are the minutes of that meeting, and I

19

suppose that the needs that we identified were those

20

that are addressed throughout those minutes, but

perhaps in the Section 2.

21

Q. Doctor, for those of us who do

22

not have those minutes before us at the moment,

23

Section 2 is the one dealing with what, the intensive

24

care and monitoring?

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B.9

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A. It was the question of the intensive care, the problem of surgical intervention, the matter of the possibility of staffing increments by the nursing and resident, and so on.







C/EMT/ak

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Q. You then go on to list options, four of them, the first of which is "no further action".

Is that an option that was put to the meeting?

A. I can't recall whether we did that. I think I must have said that at the meeting because that is what I probably worked with.

I think that the question that is raised by that option was whether or not everybody was thoroughly satisfied that we were doing everything that could be done.

Q. Nothing more could be done?

A. Yes, and I would have been very surprised if anybody had accepted that option.

Q. Was that a conclusion that as of January 12, 1981 would have been acceptable to you?

A. No.

Q. On the next page of the handwritten notes - I think I can understand that; it is a graphic breakdown of the deaths and the categories into which you placed them - on the third page of the handwritten notes, the top of the page, left hand side appears to read "Deaths other





1

2

than neonates. Infant cardiac deaths other than  
neonates, in ICU or 4A/B."

3

4

Now just below that "Since July 1980 to  
December 1980", on the right hand side, "Six-month  
period", middle of the page, "P.M. data" - post mortem  
data I take it?

5

6

7

8

A. Yes.

9

Q. And "Death but no post mortem".

10

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On the right hand side of the page  
down about 33, can you tell me to what that number  
refers?

12

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A. No, this was a work sheet.  
I don't believe this was part of the meeting. By  
the time of the meeting we had got all these things  
into order. I think these were just rough notes in  
which we were obviously trying to gather all the  
patients together and I don't think it is anything  
more than.

18

19

Now I see the small note under the  
"July 1980 to December 1980, need hour of death".

20

21

Can you tell me when that note was  
made and by whom it was made?

22

23

24

25

A. No, I don't know.

Q. Do you know why it was thought  
you would need the hour of death?





C3

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A. I am not sure. I presume that we wanted to clarify the time at which these babies died, that is all.

Q. Was it thought that the particular time of death might be significant?

A. I suppose we were looking to see whether there were more during the time when there was a lower density of staff on the ward. I don't know. I can't remember exactly what that is because that is a work sheet and we added bits and took off bits.

Q. Yes. When we come to the end of it we will see that in many cases where the deaths are set out in tabular form the hour of death is indeed noted?

A. Yes.

Q. We can perhaps come to that. Then we have a number of deaths apparently by group. I am not sure and it may be that you cannot now recall, Doctor, what the significance of the groupings may be, but if you can I would be glad to know it.

A. You are referring to the?

Q. To the circled names, yes.

A. Well, in any collection of







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C4 patients for review that is so, you know, before all the information is back from final autopsy reports and everything else necessarily, and including a number that may have occurred in very recent times it is a bit difficult to track everything down.

Records tend to be incomplete in the process - in having been processed, and they may be in different parts of the hospital.

Our own notes for cardiac medical records might be in similar process being coded and so on so that it is not always easy to be sure you have got a complete list.

Q. Yes.

A. So we looked first of all at the M&M conferences. On the right hand side there you will see --

Q. The ones you had already covered?

A. We had already covered those so we had those pretty well tightened up. Then we had a list that Dr. Trusler had for us and we went through that and checked those through as best we could.

Then I see I have got a name which is "RMF's addition" which means that Dr. Freedom





C5 1  
2 is more or less our human computer; remembers most  
3 things pretty clearly, and he added some names to  
4 that list, and I think we got some from medical  
5 records that were up above there. I'm not exactly  
6 sure, but it took us a long time to get the list.

7 Q. At the foot of the page there  
8 is what appears to be a sort of action note,  
9 Dr. Jedeikin was to check the lists and RMF - I take  
10 it to be Freedom or Fowler?

11 A. Freedom.

12 Q. "Provide 1 to 12 month  
13 infant P.M.". Can you explain what was called for  
14 there, please?

15 A. I cannot. I don't remember,  
16 but Dr. Freedom was the cardiac - the cardiologist  
17 who as you remember was also the cardiac liaison  
18 with Pathology.

19 Q. Yes.

20 A. And has a joint appointment  
21 with that Department. And I presume I must have  
22 asked him to see if he could collect the names of  
23 all those patients who had gone to autopsy under the  
24 age of a year to see if we missed any patients that  
25 were in the above list.

Q. Thank you. The next page I







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think to be self-explanatory and indeed we over the  
past two weeks covered material that was stated very  
tersely on that page I think, have we not?

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A. Yes.

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Q. The next page seems to be  
a page of numbers and a name and I am not quite sure  
what that means. It may be of some significance; it  
may be none. But who was Crystal Coulter, please?

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A. Crystal Coulter was a baby  
who was treated in the Hospital for Sick Children  
and had an abnormality of her diaphragm; had been on  
the Cardiac Ward and there had been a lot of  
discussion about whether or not that child should  
have some stabilizing operation for the diaphragm  
and had not - in the end the decision had not been  
to do that and the baby was discharged at the end of  
July of 1980 and was apparently admitted to the East  
General Hospital - I'm not sure what date - later,  
and had died there. I think I probably had that  
name in mind as someone we would want to look at  
from the potential of something that might have  
been done or at least should have been, in the light  
of this review, further considered, but in fact she  
didn't die in the Hospital - in our Hospital - so it  
wasn't reviewed.





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Q. All right. The next page is headed "4A/B Problems". Is that also your handwriting?

A. Yes, that is my handwriting.

Q. Can you tell me what 19 4A and 23 4B refers to in the top right hand corner? Those are the total number of beds?

A. I think the number of beds.

Q. That just occurred to me that is what it is.

A. Yes. I think that is right.

Q. Yes.

A. It is not a correct number. That is what it is meant to cover I think.

Q. You then identify the problems that I think you have already told us were present to your mind that you believe may have been responsible or played some part in the increased number of deaths.

And then finally before the two pages of tabulated deaths I take it some suggestions as to steps that might be taken to remedy the situation or the result of that.

A. I think those must have been notes that I took during the meeting.





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Q. Yes.

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A. Because they seem to reflect -

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they reflect the comments that are in Section 2 that

5

were made by various people.

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Q. Now the note in the middle

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of the page is "Nursing", and I wonder if you could

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read the first item for us, please, Doctor. Something

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units. Then I can't read the next word either.

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A. It is "need unit".

Q. Yes.

A. "Labelling ICU".

Q. Please, what does that mean?

A. Well, there was discussion about  
what it should be called.

Q. I see.

A. My understanding of what is  
recorded in rough there is what is conveyed in the last  
paragraph on page 3 of the Exhibit that relates to the  
minutes of the actual meeting. Those statements were  
made by the head of the Nursing Services of the hospital.

Q. All right. The next note, I  
take it, reflects the discussion as to how the proposed  
intermediate ICU was to be staffed and who was to go to  
it.

I'm interested in the next note, Doctor,  
which seems, as I read it, to say "Deaths 2 to 4 a.m.,  
Environment Staffing". Was it observed at this meeting  
that a number of deaths had occurred in those hours of  
the early morning?

A. I presume it was. I don't  
recollect that. I think that there was no doubt people  
felt there that they were occurring at night and whether  
that was a statement from a nurse or not, I don't know.





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Q. In terms of staffing, is there any suggestion, Doctor, that in the early hours of the morning the night shift is yet further reduced, there are fewer people on between 2 and 4 than there are on between 7 p.m. and 7 a.m. as a whole?

A. I'm not sure. I imagine that there is the opportunity for that because if somebody has to go for supper, where I think they do go for supper during the night. You would have to ask the nursing group, but I believe there is a period when they go for dinner or supper, and I suppose that must mean there are fewer people on the ward.

Q. All right. Does it refer to anything other than things like breaks that may occur between those hours?

A. I didn't think so. I can't recall the exact...

Q. And in what respect is the environment different between the hours of 2 and 4 o'clock in the morning?

A. I don't know what that means.

Q. Doctor, the final two pages are, as I have said, tabulations of the deaths which had occurred. You will see that the second column from the right, next to the comments column, is indeed headed on





1 the first of the two tabulation pages "Hour and Date of  
2 Death".

3 A. Yes.

4 Q. On the second of the two  
5 sheets it is merely headed "Hour/Date". In many  
6 cases the hour, the time of death is omitted.

7 A. Yes.

8 Q. I notice, Doctor, that with  
9 respect to McKeil, who is half-way down the second last  
10 page of the whole item, in the comment column there is  
11 a reference to his digoxin level of 4.7.

12 A. Yes.

13 Q. Can you tell me, was that regard-  
14 ed as a significant matter for comment in discussing  
15 the death of Baby McKeil?

16 A. I imagine it was; I can't recall.

17 Q. Do you recall t the discussion  
18 was with respect to that particular point?

19 A. No.

20 Q. Either in preparation for or at  
21 the meeting of January 12th?

22 A. No. I don't believe I prepared  
23 that particular matter, date. That looks like Dr.  
24 Jedeikin, but I don't think that -- I think we knew that  
25 there was no question the dig level was in the border-







1  
2 line range but I think the other evidence we felt was  
3 more important.

4 Q. And second from the bottom on  
5 that same page Gosselin also has a digoxin level  
6 recorded?

7 A. Yes.

8 Q. In the comments column. Do you  
9 recall any discussion with respect to that?

10 A. No, I don't think I do.

11 Q. Okay, thank you, Doctor.

12 Other than in the daily cardiology  
13 readings that you told us, when did you next review any  
14 on-ward deaths; that is to say after your review in  
15 preparation for the meeting of January 12th, when did  
16 you next review on-ward deaths?

17 A. We didn't have a major review of  
18 on-ward deaths at any time prior to March, the end of  
19 March. Our reviews after that time were really of the  
20 nature that had to be gathered together in preparation  
21 for the inquiry.

22 Q. I'm sorry?

23 A. For the police and so on.

24 Q. Yes. Doctor, can you tell me  
25 please what review was done at the end of March, which  
deaths were reviewed, by whom they were reviewed and for





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what purpose they were reviewed?

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A. I think at the end of March when it was clear that a police investigation was under way, we were informed that that investigation would extend to infants going back on that date and the names of individuals involved were gathered together again.

Q. I'm sorry, when you say individuals involved, you mean of the patients?

A. Patients.

Q. Patients, yes.

A. Patients that were involved in that decision, and I'm not exactly sure that I recall how we got the precise names that were involved, whether that was the police that gave us that list or whether we got that list knowing that they were going to go back further and didn't have any specific list from the police. But at least we decided at that point that we should individually, as responsible physicians, review each record and write a note to the families.

That was done, I think, at the end of March, very shortly after the police started the investigation, within that week, I believe.

So that letters were sent to parents of children who were involved with the exception of some who had been approached by telephone informing





1  
2 them that the police investigation was now underway and  
3 that we understood that they were going to be looking at  
4 babies going far back and that we would endeavor to  
5 stay in touch with them as the outcome of those  
6 investigations emerged, but, of course, we didn't  
7 realize that it would be a rather long, drawn-out  
8 wait because of the nature of the whole investigation.

9 Q. Doctor, I take it copies of the  
10 letters that were written to parents are available, are  
11 they?

12 A. I would think they are. I think  
13 Administration must have those letters.

14 Q. Yes, and Mr. Scott may be able  
15 to provide them to me.

16 But other than identifying the children  
17 and contacting their parents, was any review undertaken  
18 of the medical records of those children?

19 A. I didn't personally undertake a  
20 medical review of those patients. I think the  
21 responsible physicians involved would have had to review  
22 the record in order to go over that and send the letter.

23 Q. Was there any discussion amongst  
24 the members of your cardiology group about the deaths  
25 which were then reviewed?

A. I don't remember. There were







1  
2 specific points brought out about that, at that time  
3 anyway. There was a later examination, again on an  
4 individual basis by responsible physicians, of the  
5 record, I think in preparation for depositions with  
6 the police and, of course, at that point, when people  
7 were going over details, there was a discussion between  
8 the staff. We didn't have a formal meeting and advert-  
9 ize it or anything like that, but we did discuss a great  
10 number of those issues and when there were questions or  
11 anything like that, the matter was discussed with the  
12 staff cardiologists, between the staff cardiologists.  
13 We didn't have a formal review.

14 Q. When you refer to the respons-  
15 ible physicians, do you mean those physicians who  
16 happened to be the Ward Chiefs at the time of the  
17 particular death?

18 A. It was at that time the respons-  
19 ible physician was, as far as we were concerned for the  
20 letters to the parents, was what we call the Hospital  
21 for Sick Children referring cardiologist.

22 Q. Right.

23 A. Now, there were times when, of  
24 course, there was another individual involved in the  
25 management of that position and under those circum-  
stances it was very common for those people to get





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2 together and go over the information together. So that  
3 while there were no formal reviews, I think there was a  
4 fair coverage of what had happened to those patients  
5 again.

6 Q. Were you made aware or kept aware  
7 of such reviews as were being conducted by the respons-  
8 ible physicians?

9 A. Yes, I knew they were going on  
10 and we, as I say, if there was any major point that  
11 people wanted to bring out it was brought out. But I  
12 didn't go over every hospital record and check every  
13 nurse's note or medication. That I left to them.

14 Q. Now, this was at the end of  
15 March, Doctor, and during March there had been several  
16 deaths, had there not?

17 A. Yes.

18 Q. Deaths on the wards, Leith on  
19 March 6th, Warner on March 7th, Hines on March 8th,  
20 Jonas on March 9th, Manojlovich on March 12th, Inwood  
21 on March 13th, Gardner on March 18th, Miller on March  
22 21st and Cook on March 22nd?

23 A. Yes.

24 Q. Nine deaths in the month?

25 A. Yes.

Q. In respect of which of those





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deaths, Dr. Rowe, were you the responsible physician?

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A. I don't think I was the responsible physician for any, but I would have to check that for you. If you will give me a minute I will do that.

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Q. Yes, of course.

A. I don't think I was the responsible physician for any one of those.

Q. You say, late in March, Doctor, when the police investigation was under way, as I recall it, the police came into the picture on March the 21st or 22nd?

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A. 21st, I believe.

Q. And a charge of murder was laid against Nurse Nelles on the 25th of March, was there not? Is that your recollection?

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A. I can't recall the exact date.

Q. It was very soon after the institution of the investigation, wasn't it?

A. I believe so.

Q. Was the review process by physicians in charge that you have described undertaken before or after the laying of the first charge against Nurse Nelles?

A. I could tell you from the date of the memorandum that I sent to the staff about the







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need for the letters, when they must have started, but I can't recall. That letter contains a date on it and it would identify when I initiated that. But I cannot recall whether it was just before or just after the arrest of Miss Nelles.

Q. But it would be fair to say, I take it, that even if the process had started before March 25th, the arrest and charge of Nurse Nelles occurred while the process was still going on?

A. Yes.

Q. Your review process --

A. The review by individual physicians on record, yes.

Q. Yes. Well, Doctor, did it not occur to you at that stage that if there were any substance to the charges that were laid at that point, and charges were laid with respect to three other deaths two days later, did it not occur to you at that point that if there were substance to those charges, that may well go some way to providing an explanation for the increased mortality rate that you had experienced on the wards?

A. Yes.

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Q And did you not feel in any way obliged to undertake your own review or have an organized review and reporting of the deaths that had occurred during the month of March?

A No, we did not at that stage because we felt that this was now a police matter, and I think that our view was that we should not attempt to try and be police, that we should be available for police to discuss matters with, but that it was now in the hands of the police and that was the way we all looked at that.

Q Did you at a later point in time review the charts of any of the children who had died on the ward between January 1, 1981 and March 31, 1981?

A As a formal review?

Q Yes.

A No.

Q Did you -- well, perhaps we are at cross purposes. As a formal review, I do not necessarily mean was a huge meeting convened when these things were canvassed and thrown backwards and forwards in an organized formal way. I am asking whether you, Dr. Rowe, the Head of the Division at some point in time went back and looked at these charts of children who had died in the first three months of 1981?





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MR. SCOTT: Mr. Commissioner, just so we are clear, when Mr. Lamek began this line, he excluded the morning conference in which deaths of the preceding day were reviewed. I take it he still wants to exclude that. So Dr. Rowe is not supposed to tell him about the meetings every morning at which the deaths were reviewed, have I got that right?

MR. LAMEK: Q. I said other than those daily meetings. We can come back to those. Thank you, Mr. Scott.

Other than in daily cardiology meetings did you, Dr. Rowe, ever sit down at any point in time and look through these charts of children who had died in the first three months of 1981?

A. I reviewed the complete group of charts with Dr. Freedom, but it was not until after the Preliminary Hearing.

Q. So there was a point in time later -- I understood that there was, Doctor, and I was a bit puzzled -- some time after May of 1982 you and Dr. Freedom reviewed the whole group of charts?

A. Yes. We reviewed the whole historical issue and so on.

Q. From July right through to the end of March?







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A. Yes.

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Q. Thank you. I was sure that is what had happened at some point in time. I was a little puzzled.

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And what was your purpose in conducting that review with Dr. Freedom at that time, that is to say, in the late spring or early summer of 1982?

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A. Well, we had been asked to do that review. In order to try and arrive at assessments of severity of the patients, Dr. Bain required for purposes of his review some cardiological input into how we, as cardiologists, looked at the severity of the malformation of those patients. So we undertook that review and it needed, we thought, two people to do that for a number of different reasons, and that was really the purpose of that.

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But in doing that job, we had to review the histories rather carefully.

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Q. In making the review for that purpose, were you also concerned to consider the circumstances of the death of the child, the time, the course of events, the kind of thing that you and I have been talking about for the last couple of weeks, Doctor?

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A. Oh, only in broad terms.





E. 4

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Q. Now, with respect to the daily meetings of the Cardiology group, meetings, I think you have said, at 8:30 in the morning?

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A. Yes .

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Q. I take it the deaths that occurred in March as well as the ones in January and in February were discussed as they occurred?

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A. I think so, yes.

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Q. Was there any broader or deeper discussion of those deaths in January, February, March than had previously been given to deaths at the morning reviews?

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A. No, I do not think so. They were dealt with and the physician who was the cardiologist of record made the comment as to what he thought went on, and there seemed to be no particular issues involved there except on maybe one or two.

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Q. Well, Doctor, perhaps we should move on to some of the deaths then.

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There was one more death in January 1981. It was that of Janice Estrella. Janice Estrella was four months old.

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Let me find a copy of her chart.

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A. Thank you.

Q. Janice Estrella was four months





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old. She was admitted to the Hospital in December,  
on December 14th, 1980 and she died at 3:06 in the  
morning of January 11th, 1981.

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Once again, Doctor, the Hospital  
has kindly provided a diagram of what purports to be  
the anatomy of Janice Estrella's heart. Can you tell  
me, first, whether it reasonably accurately portrays  
the anatomy of that heart?

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A. Yes, it does.

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MR. LAMEK: May that be the next  
exhibit, please, Mr. Commissioner?

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THE COMMISSIONER: 97. Have we a ---  
--- EXHIBIT NO. 97: Heart Diagram of  
Janice Estrella.

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MR. LAMEK: They are brand new this  
morning. Do you have one, Mr. Registrar?

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THE COMMISSIONER: Do counsel have  
copies?

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MR. LAMEK: Q. Doctor, could you  
please describe for us the anatomy of Janice Estrella's  
heart as it appears on the diagram that we have just  
marked as an exhibit?

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A. Yes. This little girl had the  
Down's syndrome or an additional chromosome,  
Chromosome No. 21, and that condition, in about 50 per





E.6

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cent of the individuals affected with that disorder,  
is associated with congenital heart disease usually  
of the type that is seen here.

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The name that is given to it is  
complete atrioventricular defect, but it goes by many  
names in the medical world. One name is atrioven-  
tricularis communis, meaning a common single valve.  
Others call it a complete atrioventricular canal  
defect. But what it really is is an absence of the  
septum in the middle of the heart that extends from  
inside the ventricle to a way up at the top of the  
atrium. So it is really a central deficiency in the  
wall dividing the two pumping chambers and the two  
receiving chambers.

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Floating in the middle of that  
deficiency is a single valve which is represented by  
the dotted line here. At each end there is one  
component and there is a very large anterior and  
posterior what is known as bridging leaflet.

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Now, you could see that if the septum  
had been intact, then that valve could have two  
components to it. But in fact, since there is no  
septum there at all, this whole area that is embryo-  
logically called a cushion area because it is a sort  
of a spongy area where there is intimate connection of







E.7

1  
2 the valve to the wall is disturbed. So a great big  
3 gaping hole at both levels in the heart and a single  
4 large valve sitting in the middle.

5 The other condition that was present  
6 was a patent ductus arteriosus which you can see  
7 here has been tied off at the time of surgical repair,  
8 and the shaded area in the diagram is meant to  
9 represent what is done surgically, that a patch of  
10 substantial size is placed in the deficiency here  
11 and then, though we cannot really show it very well  
12 on this diagram, the valve is cut in half and then  
13 retailored and sutured to the patch on each side. It  
14 is an extraordinarily difficult technical procedure,  
15 but it is one that is accomplished fairly frequently.

16 Let me just say that the course of  
17 the circulation is the same because there is no  
18 disturbance of the great vessel arrangements. But  
19 blood comes in from the veins into the right atrium  
20 and is immediately mixing with blood coming across  
21 that huge hole from the left side. So that blood, by  
22 the time it gets down to this pumping chamber, is sort  
23 of mixed again like a Waring Blender. It is a  
24 saturation of oxygen that is not quite as high as it  
25 should be but higher than normal for blood coming into





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the right side of the heart. All of that is pumped out to the lungs, and because there is more blood going out there than usual the pulmonary artery gets large. Then it comes back to the left side of the heart and some of it goes through that hole to this side, some of it gets down here, and some of it gets out around the body.

So it is in effect the equivalent of two large holes in the heart, but in addition, there is this common valve and the problem with a common valve is that in its repair it is very difficult to get the equivalent of two normal valves because you have to do a lot of chopping of the valve and tailoring and each individual patient is a bit different with this anatomy, so that the result of the operation is often quite good in respect of the hole, but is less satisfactory in many patients because the valve is not a normal valve at any time and it depends upon how much tissue there is for the surgeon to work with, what the attachments of the valve are when they are finished as to how much leakage back across the valve there will be.

This baby then had the usual anomaly of Down's syndrome with the things I have identified, had surgery which repaired it, and was left with some





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problems on the left side of the valve.

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Q. Dr. Rowe, thank you. The

admission of Janice Estrella to the Hospital on

January 14th was not her first admission. She had

been admitted at the age of two weeks, had she not,

back in September of 1980?

A. She had, yes.

Q. And in the final autopsy report

starting at page 9 of the record, but in particular on

page 11 when we get to the child's history, there is

a reasonable summary there, is there not, of her prior

history and her course in the Hospital during this

admission.

In September 1980, when she was two weeks  
old, it had been noticed that she was dusky at feedings

and a Down's syndrome and a heart murmur was detected.

She came into the Hospital at that time in September,

some diagnosis, echocardiography was conducted and the

findings were those you have described on the diagram,

were they not?

A. Yes.

Q. And she was discharged then with

the idea that she would come back later for surgical

repair of her heart defect?

A. Yes. She really could not be







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Rowe, dr.ex.  
(Lamek)

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E.10

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repaired at that very young age because the results  
are not good, but a little later it is possible to do  
more.





/EMT/ak

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Q. At that time when she was discharged she was treated with digoxin and as the note says on page 11 with mild improvement of her cardiovascular status.

A. Yes.

Q. Now in November it was discovered that the baby was cyanotic when she was resting; she was on digoxin and diuretics but was not thriving. She wasn't doing well. She wasn't progressing, gaining weight, that sort of thing, was she? And was therefore admitted on December 14th for surgical repair of her defect.

And, Doctor, the surgical repair is on page 154 of the chart - we may not need to turn to it - but on December 16 she went to the OR for total repair, total surgical repair of the congenital defect she had, did she not?

A. Yes.

Q. And for ligation of the ductus?

A. Yes.

Q. She seems to have had something of a difficult time in the operating room and in the immediate postoperative period. In the ICU there was some collapse problem in the right lung.

And just summarizing the course if I





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1  
2 may for the moment December 28 she was transferred  
3 from the ICU to Ward 4B and she appeared to be  
4 relatively stable there, did she not, with the  
5 congestive heart failure apparently under some  
6 control. Is that fair?

7 A. Yes. I think that is fair.  
8 She had a very bad time.

9 Q. And then on January 7th  
10 there was a rather disturbing incident. She had  
11 an episode of arrhythmia, bradycardia, elevated  
12 temperature, and indeed over the next three days  
13 episodes of stopping breathing, elevated temperature  
14 and so on.

15 Then in the early hours of January 11,  
16 as we have said, she suddenly became extremely  
17 bradycardic and went into arrest and could not be  
18 resuscitated.

19 Now touching only upon the major  
20 milestones of the course, is that a fair summary of  
21 her course in her last stay in the Hospital?

22 A. Yes, that is, alas.

23 Q. Would you tell us, Dr. Rowe,  
24 what you regard as significant in the Hospital  
25 record to an understanding of the death of Janice  
Estrella and of the time and manner of her dying?





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A. Well I think she had some problems in the Intensive Care Unit that were thought to be related to hypopofusion of the brain. That is, she had signs of what we call low output, low cardiac output after the operation, and she had a high pressure in the left atrium which is characteristic of this, and she developed some seizures.

Q. Yes.

A. And she was seen by this, for neurology, by the neurology people at least, and it was felt that she was getting over that fairly well, so that was the major episode there, but it is an indication that she had some impairment of her cardiac output at that stage.

When she went back on to 4A as far as I can see the important issues were that she was not feeding well. She needed nasogastric tube. She couldn't hold her mouth around the nipple, and she had a noisy chest which was due to some atelectasis of the lung; not entirely surprising in someone with this condition of Down's Syndrome where their muscle tone is not terribly good so the chest wall doesn't expand as well as it might.

But I think the first most important change was, as far as I can see, apart from the poor







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feeding, was about the 3rd of January when it is  
said - I don't know the page number there --

3

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Q. Would that be page about 113,

5

114?

6

A. Somewhere in that region,

7

I think. 113 I think it starts, in the afternoon.

8

She didn't have any frank heart

9

failure on the day before, but on this occasion she  
had signs of heart failure.

10

Now it was said by the resident to

11

be mild. I would take it from the description of

12

what was found that it was pretty frank congestive

13

failure. The liver was enlarged --

14

Q. Spleen --

15

A. Four centimetres. There

16

were crepitations in the lung. The baby was galloping,  
meaning that the heart sounds showed a gallop at the

17

apex which is pathognomonic of heart failure. But

18

the response to lasix or diuretics at that time seemed

19

to be good.

20

Q. Yes.

21

A. And some hours later the

22

same resident was quite pleased with the way in which  
the baby had responded.

23

Q. Yes.

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A. So that is the first indication that we are heading into difficulty with failure.

Then the major concern of everybody, and especially I think the nursing staff, but of everybody involved with this baby was the nutritional status of the baby, and the baby was found to be under 3 kilograms at weight on the 4th when seen by the nutritionist, and they recognize that the ideal weight for this baby should have been 4½ kilograms, so they made some suggestion about what to do. But this we know is a very difficult area, and these are babies that we always worry about. If they are not adequately nourished they are not going to get terribly far.

Then on the --

Q. Doctor, forgive me. You are referring there I take it to the nutrition note on page 115?

A. Yes.

Q. Recording present weight 2.89 kilograms; ideal weight 4.5.

A. Yes. So that steps are being taken. They had to look into that, but there is always a concern with that situation.





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Then the next note that I could see  
in here was the one in which there was the question  
of pneumonia I think. Some fever somewhere here.

5

Q. At page 116 perhaps, Doctor,  
at the bottom of the page.

6

7

A. Yes. I think the nurses  
had reported there must have been fever. I expect  
that is how that arose, and the baby was a bit  
lethargic, and so the physicians - the resident on  
the ward saw the baby and got the impression that  
there might be some pneumonia and failure.

8

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So he undertook appropriate investiga-  
tions to try and establish this and started, I think,  
antibiotics. Throughout that day the fever remained.

13

14

15

Then there was, as you have already  
mentioned, an incident around about just before  
midnight which caused the nurses a little concern.

16

17

But where am I?

18

19

Q. Page 117, Doctor. The  
resident examined the baby at 11 o'clock at night.

20

A. I can't see where he did that --

21

Q. The note is right in the  
middle of the page I think under the 7:30 to 7:00 a.m.  
nursing notes.

22

23

Is that Dr. Runge or Dr. Rungie?

24

25







Rowe, dr.ex.  
(Lamek)

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F7

A. Runge. R-u-n-g-e.

Q. Yes.

A. I'm not sure how you  
pronounce it.

Q. Well let's agree on Runge now.

A. Yes. I think that what I  
have a note is that somewhere during that period -  
I think it must have been the nursing notes - there  
were periods of apnea.

Q. Yes.

A. Yes. I think it is in the  
nursing note in the middle of page 117. The  
respiratory rate seemed to be increased.

Q. Yes.

A. And the baby was lethargic.  
And Dr. Runge then saw the patient and that is I think  
his examination.

I had a note that he saw the patient  
around midnight.

Q. Yes. That is the note. It  
is included in the nursing note but I don't see a  
separate note from him, Doctor. It is reported there  
in the middle of the page, "Dr. Runge informed and  
examined baby at 2300 hours".

A. Oh, I think it is on page 118.





1

2

Under 6.1.81, the second note --

3

Q. Oh, yes.

4

A. "Called to see patient by

5

nursing staff at about 11:30 p.m."

6

Q. Yes.

7

A. The problem was increasing

8

lethargy; respiratory rate was less than they would  
expect it, 95.

9

10

The baby wasn't febrile at that time,

11

and the liver wasn't big, and he thought, well, it

12

looks fairly stable, but maybe the baby is slipping

13

down into failure or there is more pneumonia developing.

He couldn't see that on the x-ray.

14

So I think they just - I assume from

15

this they planned just to continue observation and

16

the treatment that was being prescribed.

17

Q. Yes.

18

A. And then at 6:50 the nursing

19

staff called him again because this time the apex

rate came down to 50.

20

Q. Yes.

21

A. And the respiratory rate

22

dropped to 45, so a 23 call was made and the liver

23

was down to 4 centimetres again, so that clearly there

24

was some change in the hemodynamics of this baby.

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They gave lasix; I don't they saw any action. They had to give the baby assistance breathing with a bag as they refer to it.

Q. Yes.

A. And they gave dopamine intravenously. Now that is not a drug that we use unless somebody is very concerned about how the baby is doing.

Q. Yes.

A. So he must have been pretty concerned at that time.

Q. Is dopamine a drug that is used in resuscitation procedures?

A. It is used a great deal in Intensive Care Units and especially in babies and individuals who have a low output, low cardiac output, so I would take it from the fact that dopamine was used that they were really quite concerned.

I think they made some notes on page 119 that suggested that the dopamine infusion should be continued; that there should be constant nursing and that consideration should be made to transfer the baby to the ICU.

Q. Yes.

A. Now I don't recall in the





F10

1  
2  
3 reviews after the death exactly what the reason was  
4 the baby was not transferred to the Intensive Care  
5 Unit. I would have thought that probably was a good -  
6 there was a reasonable indication, but it may be  
7 that there were other factors that don't emerge  
8 from those notes as to why that didn't occur.

9 Then of course the next note is  
10 that there was a noticeably irregular rate, and  
11 that was on the 10th --

12 Q. January 7th I think on page  
13 121.

14 A. 121?

15 Q. Yes.

16 A. And the rate was 80 to 123.

17 Q. Yes.

18 A. Respirations irregular, and  
19 electrocardiogram that was taken at 10:30 and I gather  
20 that blood was drawn for blood gases; and digoxin  
21 levels and digoxin was put on hold, meaning that  
22 it was not to be given until some further note.

23 Q. And the dopamine was continued  
24 as well, was it?

25 A. Dopamine was continued, and  
the digoxin came back as greater than 5, so I think  
that led to a decision not to give any more digoxin.







BMB.jc  
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Then on the 8th of January, Dr. Runge made the note on page 123 that the pulse was regular, the chest sounded fairly clear but there was some crepitations noted and the liver was still 3-1/2 centimetres, the urine output had fallen, all of which suggested, particularly in the last several hours, that there was falling urinary output which was a sign of increasing failure.

So, he tried more lasix or diuretic and I think there is no doubt here that you are in trouble because the failure is getting worse, you can't give more digoxin or you would run a very high risk I would suspect of intoxication. So, the only things left were dopamine and lasix and that's a fairly serious state of affairs.

The potassium of the blood, as I looked at that, seemed to be all right, but the digoxin level was still high on the 8th and on the 9th it was 4.7.

I assumed that that was felt to be due to the increasing failure and the impairment of renal function and although it's a bit hard to be sure about that, I think there are a couple of things in the laboratory examination of this baby that would suggest that that might be so.





G.2

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2 The blood urea nitrogen was 32, which  
3 is above the normal range by quite a bit and the  
4 creatinine level in the blood, these being two  
5 substances that are excreted by the kidney and rise  
6 in their concentration in the blood if the kidney is  
7 not working well, the creatinine level was .7 which,  
8 I think for that size baby is quite high.

9 So, I think there were reasons why  
10 the digoxin levels might have been high at that point.  
11 But it is a dilemma which they had to face and they  
12 had to skate along with diuretics and try to do what  
13 they could and to hope that the question of pneumonia  
14 would respond to antibiotic therapy.

15 The heart rate seemed to be regular,  
16 no suggestion, certainly on the 9th or the 10th, that  
17 there was any problem going on about the heart rate  
18 or irregularity. Things fell apart from the 11th  
19 and the baby developed further problems with gasping,  
20 very fast rate and then a very slow rate and then  
21 went into ventricular fibrillation, from which she  
22 could not be resuscitated.

23 Q Dr. Rowe, thank you for  
24 pointing those things out from the chart.

25 I will want to direct your attention  
to a couple of other things if I may, but I wonder if  
this is a good time for the morning break, Mr.  
Commissioner?





G.3

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THE COMMISSIONER: Yes, all right,

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15 minutes.

4

--- Short recess

5

--- Upon resuming:

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THE COMMISSIONER: All right, Mr. Lamek.

7

MR. LAMEK: Thank you, sir.

8

Q. Dr. Rowe, you have referred to the digoxin levels reported in samples taken from Janice Estrella and through a triumph of organization the Biochemistry reports are bound backwards in the chart that you have before you. Beginning I think at page 169, and we've got to work back towards the front of the binder, but the first digoxin level appears to have been recorded in a sample taken on December 22nd, page 162, a level of 1.5 nanograms. Do you see that one?

16

A. Yes, I do.

17

18

Q. And I take it at that stage there is no sign of any digoxin problem?

19

A. No.

20

Q. No level of that sort being recorded?

21

22

A. No.

23

Q. The next one is at page 159.

24

Indeed, there are four samples submitted and reported

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G.4

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on that page. On January 7th, sample was submitted in which the level recorded was greater than 5 nanograms; on January 8th a sample submitted, recorded greater than 4.7 nanograms, a second sample on January 8th was of insufficient quantity and on January 9th, 4.7 nanograms.

As I heard you a few moments ago, I think you suggested the possibility that there may have been some kidney impairment developing in Janice Estrella, which might go to explain those levels?

A. Yes, I think that is a possibility, a good possibility.

Q. Now, could we go on to page 194 for the moment, to the Doctor's Orders in this chart.

Doctor, as I read the orders given for Janice Estrella, the last digoxin order prior to January 7, the date when the level of more than 5 was recorded, the last digoxin order had been on December 28th, and it is shown on page 194, for a maintenance dose of digoxin of 0.015 milligrams.

A. Yes.

Q. And I don't know of another order between the dates of January 28th - I'm sorry, February 28th - sorry, December 28th and January 7th?

A. No.





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Q. The same dose had been ordered on the 18th of December, page 185, two-thirds of the way down the page, Dr. Jedeikin's order, digoxin 0.015 orally or 0.01 milligrams IV?

A. Yes.

Q. So, in terms of an oral dose, maintenance dose of digoxin, it seems that the dose had remained at the same size from December 18th through the 28th and continued through to December 7th - January 7th?

A. Yes.

Q. The previous digoxin level, as we have seen, had been 1.5 on that maintenance dose and now suddenly on December 7th we have greater than 5 nanograms per millilitre. And on December 8th, greater than 4.7 nanograms per millilitre.

MR. SCOTT: January 8th.

MR. LAMEK: I'm sorry, January, I'm getting the months badly mixed. January 7th, 5, greater than 5, January 8th, greater than 4.7.

THE WITNESS: Yes.

MR. LAMEK: Q. And you say that may possibly be explained by some renal function impairment?

A. Well, I think it is directly explained by the heart failure with secondary impairment









G.6

1  
2 of renal function; worsening of the heart failure  
3 with secondary impairment of renal function.

4 Q What we do know is of course,  
5 going back to progress notes, page 117, is that on  
6 January 6th, as you have observed, the long night  
7 shift from 7:30 in the evening to 7 o'clock in the  
8 morning, the heart rate of this child dropped  
9 substantially, remained in the 90's throughout the  
10 night, regular and fairly strong and periods of  
11 apnea. At 6:50 in the morning on the 7th of January,  
the apex dropped to 50.

12 A Yes.

13 Q Respirations dropped to 45  
14 becoming drowsy. Doctor, is an explanation of those  
15 reductions in heart rate, respiratory rate, the  
effects of excessive digoxin in this child?

16 A I don't know that we can say for  
17 sure. I think that is a possibility. The only point  
18 is that the failure had also worsened at that time.

19 Q Yes.

20 A And it's a bit difficult to sort  
21 out between those two possibilities.

22 Q But it is, I suggest, more than  
23 a coincidence that these episodes of bradycardia  
24 should coincide so precisely with significantly  
25 elevated blood digoxin levels?







G.7

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A. Yes, I think one would have to consider that they may have had an effect.

Q. And indeed was it not for that reason, likely for that reason, that the order was given on January 7 to hold digoxin?

A. I think that when the rate became irregular that was the reason.

Q. But the irregular rate, coupled with the very high reading of greater than 5.

A. Right.

Q. Would make it prudent?

A. Well, the irregular rate was the reason the order was written.

Q. Yes.

A. The digoxin level of greater than 5 reinforced.

Q. And, indeed, digoxin was never reintroduced for this child, was it?

A. That is correct.

THE COMMISSIONER: I'm sorry, where is the order for the hold digoxin?

MR. LAMEK: The order, Mr. Commissioner, is at page 199, the bottom order on the page dated 7/1/81 at 9:45 in the morning following the episode of bradycardia reads "Digoxin level and hold dig".





G.8

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THE COMMISSIONER: Yes, I see.

MR. LAMEK: Q. And at that time constant care was ordered for Janice Estrella also, was it not?

A. Yes, I think so.

Q. And at page 121 the orders are reflected in the nursing note for January 7, 7:55 in the morning until noon, at the end of that note, just above the name S. Fitzgerald R.N., "Dig level drawn, blood gases, digoxin on hold" and, as we have said, never reintroduced.

Now, on page 123, the note for 7 o'clock in the morning for January 8th, '81, heart rate - where do I find this now?

A. Page 122, you're referring to?

Q. Yes, 122, thank you. Heart rates in the 80 to 90 range and irregular until approximately 2 o'clock in the morning and then after that ranged from 100 to 134, irregular at times, usually regular when she was awake.

But the arrhythmias, the irregularity in heartbeat that had been apparent on the night of January 6th to 7th, seemed to be resolving as January the 8th wore on?

A. Yes.





G.9

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Q. Did they not?

A. Yes, they did.

Q. Of course, as of January 7,  
there had been no further digoxin ordered, had there?

A. No.

Q. And I take it, Doctor, we can  
agree, I think we have probably agreed already on  
this, that in light of the recorded levels on January  
7 and 8, the symptoms that are exhibited on the 7th  
and 8th of January were certainly consistent with and  
I suggest suggestive of digoxin intoxication?

A. Yes.

Q. Now, can we go to the terminal  
events, please, page 128.

Now, I want to start with the nursing  
note for the period 7:30 in the evening, January 10  
until 3:30 in the morning of January 11th. Nursing  
note is that the apex is 142 to 114 and regular  
throughout and strong. Certainly at that stage there  
is no indication of any arrhythmias or irregularities,  
is there?

-







BN/ak

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Respiration continues to be fast and the temperature  
is elevated. The note is: "Other vital signs remain  
stable."

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There is no mention of the child  
in distress of any sort in that period, is there,  
Doctor?

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A. I am looking just to see.  
Yes, up to that point, none.

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Q. No. And then perhap we can  
go to Dr. Tucker's note, two pages back at page 126.  
There are two page 126's, the first of them, please.  
It is the note at the bottom of the page, January  
10th, 1981, 11:30 at night, 2330. Temperature seems  
to have dropped apyrexial now. Respiration rate  
still elevated, the chest is clear, abdomen soft,  
the liver 1 centimetre, and no spleen enlargement.  
Baby sucking on a soother, stable, no signs of  
failure. The rather dramatic episodes of the 7th  
and 8th appear to have resolved at least in this  
period, do they not?

20

21

A. Well, on the basis of that  
observation, yes.

22

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Q. Well, the liver is smaller in  
size, spleen is not enlarged, the chest is clear.  
There is no high temperature, and Dr. Tucker says no





1  
2 sign of failure, baby stable.

3 And then there appears to be a sudden  
4 onset of the terminal events, does there not? At  
5 2:40 in the morning, let us go back to the nursing  
6 note on page 128, at 0240 hours, baby was observed  
7 to be slightly something.

8 MS. CRONK: Gasping.

9 MR. LAMEK: Q. Gasping, thank you.  
10 Gasping and respiratory rate rapidly going down.  
11 Apex was found on auscultation rate on monitor shown  
12 at 202, and over, and then down to two something.  
13 Cardiopulmonary massage instituted while Code 25  
14 is called. At 0245 the arrest team arrives. They  
15 incubate the baby, they bag her. It says, look at  
16 their report -- Dr. Tucker's report one page further  
17 back, the cardiac arrest dated 11th of January, 2:50  
18 in the morning. Cardiac arrest, baby found bradycardic.  
19 Respiratory rate down. Cardiac arrest team called.  
20 Cardiopulmonary massage instituted. Incubated, then  
21 orotracheal tube. Cardiac drugs given as per the  
22 accompanying drug sheet. Cardiopulmonary resuscita-  
23 tion continued for 37 minutes; no response. Pupils  
24 fixed and dilated noted at 0306. No heart beat.  
25 Cardiopulmonary resuscitation discontinued 0322.  
Baby pronounced dead by external means 3:22.





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3 Doctor, is there not a startling  
4 contrast between Dr. Tucker's note at 11:30 on the  
5 page before and the arrest note that she writes three  
6 hours later at 2:50?

7 A. Yes, there is.

8 Q. Certainly we can agree a  
9 sudden onset of the terminal events?

10 A. Yes.

11 Q. And a very rapid and  
12 apparently reversible cause?

13 A. Yes.

14 Q. Are those events and their  
15 onset and rapidity of cause consistent in your  
16 judgment with the child's anatomical and clinical  
17 condition?

18 A. I would think so, particularly  
19 based on what the cardiologist told me, Dr. Duncan.

20 Q. And what did Dr. Duncan say?

21 A. Well, Dr. Duncan felt that  
22 this was, of all the babies he had seen in recent  
23 times, one of the sickest, one of the most difficult  
24 to manage the failure of, and I do not think he would  
25 have agreed with Dr. Tucker that the baby was not in  
failure. I do not think the evidence really supports  
that optimistic statement.





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Q. Who was Dr. Tucker?

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A. Dr. Tucker was a resident.

4

Q. I suppose the only advantage

5

Dr. Tucker had, Doctor, was that she was there and

6

actually saw this baby; is that fair?

7

A. Well, I think that Dr. Duncan

8

was there for a good deal of that period of time,

9

not during the night but beforehand, and I think

10

that there was nobody in the cardiology group who

11

thought this baby was out of failure.

12

Q. Doctor, are the terminal

13

events that we reviewed and their onset and their

14

progress also consistent with this child's suffering  
from digoxin intoxication?

15

A. Yes.

16

Q. Doctor, a sample was taken

17

at autopsy and submitted for digoxin level, was it  
not?

18

A. I understand that to be the

19

case.

20

Q. Do you know why that was

21

done?

22

A. No, I do not. It may have

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been because of those levels during life, but I am

24

not sure exactly how that came about.

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Q. Certainly, Doctor, of all the cases that we have reviewed to date, I do not recall any other in which there is note of a post mortem autopsy sample being taken for digoxin assay, do you recall any of them?

7

A. No.

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Q. At page 158 there is a biochemistry report dated 13th January, 1981 in respect of a sample of January the 11th, 1981, sample number, I believe it is 689246 recording a digoxin level of greater than 4.7. Now, no digoxin had been ordered, we have said, since January the 7th, had it?

14

15

A. Yes, I think it goes back that far.

16

17

Q. And the last reading recorded on January the 9th had been 4.7 simpliciter?

18

19

20

21

Q. Doctor, do you have any comment on the fact that on the report of January 13, a sample of January 11 was reported and a greater digoxin level than that recorded on January the 9th?

22

A. No, I do not.

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THE COMMISSIONER: This is an ante mortem sample?





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MR. LAMEK: No, I understand this sample was taken at autopsy, sir.

THE WITNESS: This was at autopsy?

THE COMMISSIONER: Does it say that somewhere?

MR. LAMEK: I believe it was taken at autopsy because the child died in the very early hours of January the 11th. There would not have been a sample taken during that day. The child died at what, 3 o'clock in the morning of the 11th?

THE WITNESS: I wonder whether it was taken during the resuscitation.

THE COMMISSIONER: But I thought that this was taken in the Hospital for Sick Children, and I thought that they did not take any post mortem samples.

MR. LAMEK: As I understand it, Mr. Commissioner, it was not the practise to take post mortem samples, which is of course why I asked Dr. Rowe if he knew why in this case one had been taken.

At page 12 of the chart, Mr. Commissioner, in the final autopsy report, in the final paragraph it is reported:

"Samples of postmortem blood were





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"obtained for assay of digoxin levels."

3

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THE COMMISSIONER: Yes, I saw that  
somewhere in one of the other -- yes, that is page  
157, that is the 72, is it not, digoxin?

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MR. LAMEK: That is the 72 on page  
157. I am going to be coming to that one,  
Mr. Commissioner.

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THE COMMISSIONER: All right, I am  
sorry, I am getting ahead of you. I just would like  
to know ---

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MR. LAMEK: Q. It is my understanding  
that the sample that is referred to on page 158 was  
also a sample taken at autopsy; is that your under-  
standing, Dr. Rowe?

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A. No, I did not know about that  
sample. But I guess that if there is no order for  
a sample, there is no order for a dig level in any  
of the records -- I have not looked to see that -- but  
if that is the case, then it either has to come from  
the time of the arrest or at post mortem, as you  
suggest.

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Q. If we look at page 204 of  
the record, Doctor, the order is written on January  
9, 1981. I am looking at the very bottom one on  
the page.







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MR. SCOTT: What page?

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MR. LAMEK: Q. 204. Apparently

had originally suggested a digoxin level tomorrow morning, but in the first place that would be January 10, not 11, and in the second place the order was crossed out.

A. Yes.

Q. And I see no subsequent order for a digoxin level?

A. Is there any information over the arrest team that tells whether perhaps that is a possibility?

THE COMMISSIONER: The reason that I brought this up was at page 158 there is a greater than 4.7, and then at page 157 it comes out at 72, and I would have thought it was possible, at any rate, that one of them was ante mortem and the other one was post mortem.

MR. LAMEK: Certainly they are not the same samples, Mr. Commissioner, especially when numbers are different and indeed the digoxin book identifies them quite separately. I will point that out to Dr. Rowe in a few minutes.

THE COMMISSIONER: Yes, all right.

MR. LAMEK: Q. Now, Dr. Rowe,





1  
2 perhaps we should turn to page 157, biochemistry  
3 report, which again records in a sample of January  
4 11th, 1981 Specimen No. 889241, a level of 72  
5 nanograms per millilitre was recorded.

6 A. Yes.

7 Q. Now, we know and it appears  
8 from apparently an earlier assay on that same sample  
9 and reported on page 156 also at 72 nanograms; are  
10 you aware, Doctor, that there was subsequently some  
11 question as to whether that sample had been  
12 contaminated and as to its origin and source?

13 A. The first I heard of it  
14 was at that stage.

15 Q. The thought that maybe it  
16 was what is known as gutter blood from autopsy?

17 A. Yes.

18 Q. And therefore, not a very  
19 reliable blood sample, I take it, was the thought?

20 A. Yes, I think that would --  
21 I do not know how strong that feeling was then,  
22 but certainly later.

23 Q. But if in fact, as I suggest,  
24 the sample that is reported on page 158 is a different  
25 sample and perhaps not subject to that criticism,  
then we have got to grapple with how that reading





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comes about, do we not?

A. Yes.

THE COMMISSIONER: Are you referring  
to page 157 or page 158?

MR. LAMEK: I was referring to 158,  
Mr. Commissioner, the greater than 4.7 reading.

THE COMMISSIONER: Yes.

MR. LAMEK: Q. In Exhibit 46 at  
the Preliminary Hearing, Mr. Commissioner, ---

THE COMMISSIONER: Go ahead,  
Mr. Lamek, I am the only person without a copy. You  
can go ahead.

MR. LAMEK: Perhaps we can loan one  
to you, Mr. Commissioner.

THE COMMISSIONER: Well, I guess  
perhaps I had better.

MR. LAMEK: Q. Volume 2, Exhibit 46,  
the very last page of Exhibit 46, sir.

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I/EMT/ak

On the right hand side of that page, a third of the way down, is the date, Monday, January 12th, 1981. And, Dr. Rowe, I will show this to you as well.

These I understand are the digoxin books maintained by Dr. Ellis in which he records the samples which he has assayed and the results that he has achieved.

Items C and D, on Monday, January 12th, about Estrella, Janice. And looking over for a moment to the sample number column, the first one is, not as I thought 689 but G89241 which I believe to be the sample reported, Mr. Commissioner, on pages 157 and 158 at 72 nanograms the, if you will, the suspect sample, as being contaminated, and a second, and indeed looking back against the name Janice Estrella, and Item C, very small writing, there is the words "post mortem, possibly diluted specimen from pathology".

A. Yes.

Q. The next entry is "Estrella Janice, post mortem from vein". That is Sample No. G89246 which is a sample reported on page 158 as being greater than 4.7 which is indeed the value reported in the digoxin book, is it not?







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A. Yes.

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Q. So it appears, does it not,

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Dr. Rowe, that two samples were taken: one apparently

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from a vein at post mortem and the other as we will

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no doubt hear at a later stage, but as I understand,

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from the general chest cavity and may therefore have

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been a contaminated sample. The sample from vein on  
assay produced a reading of greater than 4.7.

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I think as we have said before with

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respect to such recorded levels, there is no way of

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knowing how much greater than 4.7 that reading really  
is, is there?

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A. I believe so.

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Q. Now, Dr. Rowe, when did you

15

first become aware that levels of 72 nanograms and

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of greater than 4.7 nanograms had been recorded in

17

post mortem samples taken from Janice Estrella?

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A. The only of those two

levels that I am aware of is the 72.

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Q. When did you first become

20

aware of that?

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A. I became aware of that when

22

the final autopsy report was sent to the physician,

23

the HSC referring physician which is Dr. Fowler.

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Q. We referred to that a few

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1  
2 moments ago. It is at pages 9 to 12 of the chart.  
3 Unfortunately we don't know the date of the final  
4 report, do we?

5 A. No, we don't know the date  
6 of the final report. We know when we received it.

7 Q. But in the final paragaph  
8 of the textual material, on page 12 of the chart,  
9 the pathologist reports:

10 "Samples of postmortem blood were  
11 obtained for assay of digoxin levels.  
12 These samples were contaminated  
13 slightly by edema fluid and ascitic  
14 fluid. The digoxin levels on these  
15 samples measured 52.0 nanograms per  
16 millilitre (toxic range 2.0 to 9.0  
17 nanograms per millilitre blood). This  
18 level is markedly elevated over the  
19 normal therapeutic range, and if  
20 accurate would explain the death of  
21 the patient."

22 Now do I understand you to have said  
23 that it was when the final autopsy report was  
24 received that you first became aware of that level  
25 having been recorded?

A. Yes. That was in the week -





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I don't have a calendar in front of me, but it was a week, the second week in April - the second week in March.

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Q. What was your reaction when you became aware of that reading?

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A. Well, Dr. Fowler showed me that information and asked me what I thought that might mean.

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Q. And what did you think it might mean?

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A. I thought - well, we didn't know what it meant, but we thought that it might be an error; that there might have been a decimal point misplaced there as something of that sort, and we were a little concerned about the comment of the samples themselves, and so the question of the contamination issue, in any sample which you are looking at is something one has to be concerned about. But we found that level unbelievable anyway.

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I thought it was most likely to be explained by one or other of those points, and I think we talked about a little and suggested we get Dr. Freedom to look into it a bit further. Perhaps check out - and he did have some knowledge about that which I think he has testified about previously.







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And that was the way it was left.

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Q. Did Dr. Freedom in checking  
into the matter --

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MR. SCOTT: Sorry, Mr. Lamek, when  
was this?

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MR. LAMEK: Q. Yes. When did  
this occur? I take it shortly after receiving the  
report? Second week of March I think the Doctor --

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A. I think it was in March.

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Q. Yes.

A. I remember it came in a few  
days before Kevin Pacsai died.

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Q. Did Dr. Freedom in checking  
the matter out as you requested report to you that  
indeed the second sample had been drawn and assayed  
from a vein apparently, and in that case the level  
reported was greater than 4.7 nanograms per millilitre?

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A. I don't recall that. I don't  
recall that.

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Q. You say you found the level  
of 72 unbelievable. Do you mean that literally? You  
didn't believe it?

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A. Well, the reaction was one of  
considerable astonishment that there was a level of  
that nature.





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3 We recognized that this baby had  
4 digoxin levels that were moderately high, but we  
5 thought they were in the therapeutic borderline  
6 toxic area, and we didn't think it very possible that  
7 a patient would have 72 in the blood with that  
8 clinical picture, and so on.

9 Q. Not having had the drug  
10 ordered for it --

11 A. No.

12 Q. -- for four days?

13 A. No. We thought it was most  
14 likely it was either error or that there may be  
15 some way in which the specimen was giving a level  
16 like that for other reasons.

17 THE COMMISSIONER: Assuming,  
18 Doctor, that the results of the examination, at least  
19 of the tests which were reported - the only dates  
20 that we have are the dates - there is nothing on  
21 the autopsy report but there is a date on page 157  
22 and page 156 showing the 72 figure; assuming they  
23 were reported today, to whom would they be reported?

24 THE WITNESS: If they were  
25 reported today, Mr. Commissioner?

THE COMMISSIONER: They say results  
flagged and were reported today, and today appears





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to be the 17th of January on page 156 and the 20th of January on page 157 - sorry, the 17th of January, page 156. They would be reported presumably, would they not, to the --

THE WITNESS: Well, today, you know, things changed at that time and there were levels taken subsequent after the March events.

THE COMMISSIONER: No, but if this is correct, the dates on this report, 156 and 157 was the 17th and the 20th of January, each showing a level of 72, I'm just wondering where it would go to; who would get it; who would have written the note that it may be gutter blood on page 156?

THE WITNESS: I don't know. I can't recognize that handwriting. But I am not sure to whom that report would go.

I assume that we didn't hear earlier because it was incorporated in the record with the postmortem material and didn't get to the cardiologist.

THE COMMISSIONER: Well, Dr. Ellis told us that when he - when the levels - I think he reported them daily; they came out on a computer sheet at the end of the day anyway, but he reported them daily when they were over the therapeutic level.

THE WITNESS: Oh, yes.





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THE COMMISSIONER: And I just wondered to whom he reported and why it didn't get to you.

THE WITNESS: I am not sure. I presume it was because of the postmortem nature of it. I don't know. We didn't get that report anyway. Nobody in our division got that report.

MR. LAMEK: Q. Apparently the sample was sent and the level requested by the pathologist - that would appear from Dr. Ellis' digoxin book I think where he reports the area of the Hospital from which the sample comes or the request comes. For each of these two the notation is "path" - pathology I take it as opposed to a ward number to which he reports results normally I take it?

A. I presume that means he would send the report to Pathology, yes. I don't know. I think you might have to ask --

Q. Yes.

A. -- that specific question to Dr. Ellis or whoever made up the report.

Q. In terms of the double reporting, the double assaying of the sample which was reported as having 72 nanograms in it, I show you,







1  
2 Dr. Rowe, Exhibit 45 from the Preliminary Inquiry  
3 (and the first page of figures inside that exhibit  
4 is actually the third page, Mr. Commissioner, of the  
5 total exhibit) where in the top left hand side under  
6 the date 15th January, 1981 - this follows on from  
7 the previous one - sample C is from Estrella Janice,  
8 post mortem, pathology, 11-1, date of sample, and  
9 the number which we now recognize as G89241 and the  
10 notation repeat, "RPT" I take it.

11 Lower down the page under the  
12 heading 16th January, 1981, Item C, Estrella, Janice,  
13 post mortem, 74 circled. Apparently 3.7 times 20  
14 represents the dilution that he had to go through.

15 The same sample number for the 72  
16 reporting 72 nanograms. Right?

17 A. Yes.

18 Q. And Item G on that same day -  
19 apparently he did it all again - Estrella, Janice,  
20 same sample number, reporting on this occasion 70  
21 nanograms.

22 It appears it wasn't for want of  
23 trying that he felt obliged to produce that result.

24 A. No.

25 Q. Now, Doctor, I can appreciate  
that seeing a level of 72 nanograms in the autopsy





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report in that way would indeed have stretched  
your credulity. I can understand that.

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May I ask you this: if you were to  
see a level of 72 nanograms and in an accompanying  
sample, but separate sample, a level of greater than  
4.7 higher than the last measured level in the child,  
and after four days of no administration of the drug,  
would that have lessened your incredulity?

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A. If I had seen one in --

Q. If you had seen the additional  
sample of greater than 4.7 taken from a separate  
vein source?

A. Well, it would depend upon  
the vein source. I think if there is any possibility  
that that was contaminated too, then that might  
make some difference.

But at any rate I think that would  
suggest - although we don't know what 4.7 is, I  
agree because it doesn't say.

Q. We don't know how high --

A. -- how high it would go.

Q. Yes.

A. I would have been thinking  
I suppose about the levels that were obtained in the  
baby during life, although I agree you can't tell for  
sure what that 4.7 is.





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Q. Dr. Rowe, upon receiving Dr. Freedom's report or word back from him after following up the matter, as you have requested, did you form an opinion as to the probable cause of death of Janice Estrella?

A. Yes.

Q. And what was it?

MR. SCOTT: What period are we talking about, Mr. Lamek?

MR. LAMEK: I'm talking about the time when Dr. Freedom came back to him having made the inquiries that Dr. Rowe requested, in light of the 72-nanogram level.

Q. What was that level?

A. Well, I think that we felt that the situation about the digoxin levels was still not satisfactorily cleared from the possibility of heart defect and that the patient's course clinically, as judged by the Cardiologist involved, Dr. Duncan, and others who had been involved, was compatible with death from congestive heart failure. Obviously there was perhaps still some issue there, but my understanding was that that material was contaminated fluid.

Q. You say was compatible with congestive heart failure?







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A. Yes.

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Q. Was it your opinion that the death was caused by congestive heart failure?

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A. I think that was the opinion that was expressed by the cardiologist involved and I thought that seemed a reasonable suggestion. I have said before that we cannot exclude the issue that because of the high digoxin levels during life there may not have been some contribution from digoxin.

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Q. In the summer of 1982, Doctor, when you were conducting, with Dr. Freedom, the review of all these deaths from a cardiology point of view for the assistance of Dr. Bain, were you aware at that time of the results of assays performed by the Centre for Forensic Sciences on heart muscle taken from Janice Estrella, fixed heart muscle?

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A. No, I don't think I was. I didn't look at that data in any depth at all that was obtained from tissues. First of all, I'm not really competent to understand what it means and I gathered that there was a good deal of growing concern about the validity of some of the events that go on with digoxin after death.

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Q. Well, does that go back to what I think you have told me earlier today, Doctor, that





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the purpose of your review was to score the severity  
of illness? .

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A. Yes.

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Q. Not to assist in the determination  
of the cause of death?

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A. Yes, at that particular time.

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Q. At that particular time?

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A. Yes.

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Q. Has there been any other time,  
other than the ones you have told me, when you have  
reviewed this death or reconsidered your opinion as  
to its probable cause?

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A. Well, I think there have been -  
I can't tell you what the period of time was but it  
was substantially later than the period we're talking  
about.

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Q. Yes.

A. And my understanding was that

the sample that was collected for this was obtained  
by milking a leg, to squeeze fluid from the limb into  
the pelvic cavity.

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Q. I'm sorry, which sample are we  
talking about, the gutterblood sample.

A. The sample - I understood it was  
just ---





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Q. You only thought there was just the one?

A. Yes.

Q. With the 72 reading, yes.

A. Yes. And I think with the knowledge that we have with hindsight and what we have been learning about digoxin in tissues, that in a baby that had been running relatively high levels during life, it would not be terribly surprising to me that the tissue level might be high.

Q. Janice Estrella died the day before your meeting of Monday, January 12, Doctor. Was the death discussed at your cardiology meeting on the morning of Monday, January 12th?

A. I cannot remember, but I imagine it was, because that's the practice that we followed.

Q. Do you recall either at that time or at any other time any other staff cardiologist at the Hospital for Sick Children or any Cardiology Fellow raising any question as to the cause of death of Janice Estrella being something other than congestive heart failure?

A. No, I don't, except that I have a note on the cardiology progress note that's not in the chart, it's in the cardiac Zebra package which was taken by the police, and we have a copy of it,





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by Dr. Schaffer, who was the Resident at the time.

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Q. Yes.

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A. And Dr. Duncan was the Staff  
Cardiologist. Dr. Schaffer was the Resident who must  
have been there at the time of the arrest because he  
has a note, a brief note about that. He has a note  
to the effect that he notified the Coroner's Office,  
but the note immediately following that says:

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"Felt not to be a Coroner's case".

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So, I assume from that note that  
Dr. Schaffer raised the matter with the Coroner and  
after a description of the events with the Coroner, it  
was decided that the death was related to natural  
causes.

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The Cardiologist, Dr. Duncan, tells  
me that he doesn't remember that decision and he  
thought that of all the babies that he had seen, and I  
think I have mentioned this before, that had been seen  
in this period, this was the one baby for whom he felt  
absolutely totally convinced there was a natural  
cause of death.

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So, I think it was that emphasis. But  
I cannot remember Dr. Schaffer doing more than saying  
that they had been having I think these difficulties  
in keeping the dig level to values they would have  
preferred to have seen.







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They assumed I think, and there didn't seem to be any disagreement that I could detect about this, that the baby's condition was indeed very severe and that the failure was the result of the malformation.

Q. Doctor, this child was administered to on two occasions by the arrest team, was she not? On the 7th, page 120 of the chart, on the 7th when there was that episode of bradycardia, Code 25 was called?

A. Yes.

Q. And on that occasion the baby was revived?

A. Yes. Hadn't actually arrested at that point.

Q. Hadn't actually arrested, fair enough, but it was apparently threatening to sufficiently loudly that it was thought appropriate to call a 25 and make sure that she was brought back?

A. Yes, I think that's fair.

Q. Yes. Doctor, would I unfairly characterize this child's course from the 7th of January if I said that on the 7th of January, a day when the digoxin level of this child is found to be greater than 5 nanograms per millilitre, the baby has





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a period of severe bradycardia to the extent that the  
arrest team is called?

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A. Yes.

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Q. That on the 7th and the 8th he  
continues with a regular pulse and so on, but if I  
read the chart through the 9th, page 124, the 10th,  
page 125, right down to Dr. Tucker's note on page 176,  
which we have read already, the picture is one of  
relative stability, is it not, in that intervening  
period after he's gotten over the period of respiratory  
irregularity, surely tachypnea continues but there are  
no signs from the chart, are there, that the heart  
failure is getting worse and worse and worse in that  
period?

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A. I think there is on the 8th.

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Q. On the 8th?

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A. Yes.

Q. Well, I took you to the 9th.

The 8th he is still getting over the 7th, isn't he.  
By the time we get to the 9th, Doctor, on page 124,  
we are eliminating urine with the lasix quite  
satisfactorily, are we not?

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A. Yes.

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Q. Colour is not great but the urine  
elimination is very much better, the heart rate





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settled down and is regular, the respiratory rate mainly in the 70's range, periods of apnea, but is there any deterioration between the 9th and the 10th?

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A. Well, I can't see it on that record. I unfortunately don't have a cardiologist note here, which would help clarify that.

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Q. And then suddenly on the morning of the 11th the child goes into a sudden and precipitous decline after a period of apparent relative stability for a couple of days. The terminal events you told me are indeed consistent with digoxin intoxication?

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A. Yes.

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Q. We turn up with postmortem levels two different samples in apparently toxic ranges, Doctor, can you really be satisfied that this child died and the probable cause of his death was congestive heart failure?

A. Well, I think that the only way I can respond to your continued questioning on that is to say that the signs that were reported to me by the cardiologist involved suggested that this baby was in very severe failure, and I think we have talked before about the description of patients being stable while there is insidious ongoing increments of their







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degree of failure. We know in this baby that indeed the dig levels were at the point where there might at any time I suppose be some toxic effect, just from the level itself in a very sick baby who appears to be having some difficulty with renal function.

So, I think it is difficult always to sort out the role in a baby who appears to the cardiologist to be going downhill from congestive failure as to how much the final event is tipped by the renal failure getting worse or the dig level getting slightly higher. I think that is an issue that they addressed and their conclusion was that the baby was very sick. I would be prepared to accept that.

I think that the other question about the digoxin levels would depend upon what the details are about where the samples were collected and precisely how they were collected and so on. I think that's another matter.

Q. Well, okay, Doctor, I don't think we need to spend much more time on this.

Just one question if I may, please, in terms of the renal failure that you are suggesting was occurring here, does it not appear from the nursing notes for the 9th and the 10th, particularly





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the 9th, we haven't come to the 10th yet - yes, and the 10th - that particularly with the assistance from diuretic lasix this child was in fact, it was in some sort of renal failure, coping with it, handling with it and eliminating urine?

A. As a result of the administration of lasix.

Q. Yes. Isn't that what lasix is, one of the things that lasix helps you to do?

A. Yes, it does.

Q. Yes, okay.

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Q. Doctor, we are going to take a look at Frank Fazio now, if we may. We may be without a diagram, Mr. Commissioner. We do have a small one, okay. We do have the small diagrams, Mr. Commissioner, not the big one just at the moment.

Doctor, I am showing you this time what I understand to be a diagram, a small diagram this time of the heart of Frank Fazio. Can you tell me first whether that indeed accurately represents that child's heart?

A. Yes, I think it does.

MR. LAMEK: May that be the next exhibit, please, Mr. Commissioner.

THE COMMISSIONER: 98.

---EXHIBIT NO. 98: Heart Diagram of Frank Fazio.

MR. LAMEK: Q. Now, Dr. Rowe, I think we all have the same words and music before us, but unhappily the people in the public benches do not have access to this diagram. I wonder if you could demonstrate the anatomy of this child's heart by reference to the diagram of the normal heart because it is not so grossly anomalous as some have been, is it?

A. No.





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Q. Thank you. Can you reach that?

A. The main cardiac problem in Baby Frank Fazio was that there was a coarctation of the aorta. So there was a narrowing of the aorta opposite the ductus arteriosus which was patent at the initial assessments.

In addition to the coarctation of the aorta and the ductus arteriosus, there was an atrial septal defect, and of more importance, I think, was the abnormality of the mitral valve.

The mitral valve exhibited mitral stenosis, which means that it was obstructed, not completely so, but had evidence of obstruction with thickening of the leaflets and reduction of the orifice size of the valve.

The only other important condition with this baby was the presence of congenital ichthyosis, i-c-h-t-h-y-o-s-i-s, which is a congenital abnormality of the hard layer of the skin, so that the baby is covered with very hard skin more like an animal skin than a human skin. It is a very abnormal part to the superficial layers of the skin.

But the circulation in this baby was pretty much the way it goes normally, that is







1  
2 venous blood comes into the right side of the heart,  
3 out to the right ventricle, into the pulmonary artery,  
4 back to the left side <sup>through</sup> the pulmonary veins. It  
5 had difficulty in getting down through the mitral  
6 valve because it was obstructed, so a good deal of  
7 it would go through the atrial defect, and then what  
8 got down here would then go out into the aorta and  
9 be obstructed at the point of the coarcted segment.

10 Q. Thank you, Doctor. Frank  
11 Fazio was admitted to the Hospital for Sick Children  
12 on January the 5th, 1981 at two days of age, and he  
13 died on Ward 4A at 4:45 in the morning of February  
14 3rd, 1981.

15 Now, Doctor, I think once again we  
16 can probably rely, can we not, on the death note,  
17 the discharge report at page 14 of the chart for an  
18 overview of his course in the Hospital?

19 A. Yes.

20 Q. I apologize that with the  
21 best will in the world, even rebinding this, it still  
22 runs backwards from 14 to 13 to 12.

23 This baby was referred to the  
24 Hospital for Sick Children from Northwestern General  
25 Hospital with three problems, one of which was that  
he was cyanotic, I believe. His liver was enlarged.





1  
2 Is that a symptom that is suggestive of congestive  
3 heart failure, Doctor?

4 A. Yes, especially if it  
5 improves when he is put in oxygen.

6 Q. He was investigated at the  
7 Hospital and all within a day of his admission he  
8 had an x-ray, chest x-ray, an ECG and a 2-D  
9 echocardiogram, did he not?

10 A. He did.

11 Q. Lab work and catheterization,  
12 and was found to have the congenital heart defects  
13 that you have described?

14 A. Yes.

15 Q. The ductus was still patent,  
16 and I take it in light of the coarctation, it was  
17 important to keep it so, and he was therefore given  
18 prostaglandin E-1.

19 A. Yes.

20 Q. And two days after admission,  
21 that is to say, on January 7th he went to surgery for  
22 a repair of the coarctation and for ligation of the  
23 ductus arteriosus?

24 A. Yes.

25 Q. After surgery he continued  
in heart failure, treated with digoxin and diuretics,





1  
2 but also he developed some infection, did he not,  
3 and had a recurring respiratory problem associated  
4 with some collapse primarily in the right lung, as I  
5 recall?

6 A. Yes.

7 Q. But on January the 12th he  
8 went from the ICU back to the ward, to Ward 4B at  
9 that stage.

10 On February 1, after two and a half  
11 weeks on the ward, he returned to the ICU because  
12 his respiratory condition had deteriorated. The  
13 following day, February 2 he was returned to the ward,  
14 this time to Ward 4A, and that night in the early  
15 hours of February the 3rd he suffered a cardiac  
16 arrest and could not be resuscitated.

17 Now, once again that in very short  
18 compass purports to summarize this child's stay in  
19 the Hospital. Recognizing it for what it is as a  
20 summary, is that a fair statement of the course,  
21 Doctor?

22 A. Yes.

23 Q. Thank you. Can I ask you  
24 once again, please, to tell us what you regard as  
25 significant in this child's record for an understanding  
of his death and the time and manner of his dying?







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THE COMMISSIONER: This child,  
I take it, was back in the ward, was he, on ---

MR. LAMEK: Back in the ward on 4A  
having returned ---

THE COMMISSIONER: What date did  
he go back?

MR. LAMEK: He went back on  
February 2nd, Mr. Commissioner. He went to the  
ICU on February 1 from 4B, and on February 2 went  
back to 4A from the ICU.

THE COMMISSIONER: No, that is  
not quite what the discharge report says. It seems  
to indicate that he went to the ICU on the 2nd of  
Feburary.

MR. LAMEK: Yes, in fact he went  
very late at night, Mr. Commissioner, and if you  
look at page 64 of the chart, you will note half way  
down the page, ICU nursing admission note, arrived  
from ward at 2330. In fact he arrived just before  
the end of February 1, I believe.

THE COMMISSIONER: And then he went  
back.

MR. LAMEK: Then he went back to  
the ward on February 2, the next day. He stayed  
there for the balance of the night and the next





1  
2 morning went back to the ward, and that night in the  
3 early hours of February 3 he died.

4 Q. I think I have that right,  
5 do I not, Doctor?

6 A. I thought it was the 4th that  
7 he died. The early hours of the 4th I thought he had  
8 died.

9 Q. Was it the 4th, I am sorry.  
10 Yes, you are absolutely right, he went back on the  
11 3rd and died on the 4th.

12 A. He went back on the 2nd.

13 Q. 2nd and died on the 4th.  
14 Yes, he transferred back from the ICU on the 2nd,  
15 that is page 68, and the arrest is in the early hours  
16 of the 4th, that is right, I am sorry. I got the  
17 1st and the 2nd right and got the date of death  
18 wrong.

19 Now, Doctor, what are the significant  
20 matters in this chart in your judgment?

21 A. Well, there are a few points  
22 in the Intensive Care Unit. He obviously  
23 had a difficult time there. He was treated with  
24 digoxin for his persistent heart failure after the  
25 operation, and as I understand it, his  
digoxin levels there were within therapeutic range





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3 even though there had been some concern expressed  
4 by at least a physician or a nurse in the Intensive  
5 'Care Unit that a little episode of diarrhea that he  
6 had might be related to the digoxin.

7 He had an unstable temperature after  
8 return to the Cardiac Ward for the first time, and that  
9 raised the question of sepsis. He had some  
10 apneic episodes and I think his blood cultures came  
11 back eventually showing growth of some organisms,  
12 which confirmed that he had some septicemia or blood  
13 stream infection. So he was having some problems  
14 of that sort.

15 Then he started to have some jerky  
16 movements of his extremities. I think they began  
17 to increase a bit around the 14th, and so that raised  
18 a new question about what that was due to, and he  
19 was seen by a neurologist then and they thought  
20 that perhaps it had been related to an episode of  
21 hypoxia at the time he was born.

22 Then apart from the skin issue,  
23 which is an important one I think, because children  
24 with this skin abnormality are prone to develop  
25 sepsis, he had episodes around the 17th to the 20th  
when he had some irregular heart rate, and I took  
that to be something of importance. There were





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digoxin levels taken at that time, and I do not see  
the level anywhere, but it is noted in the chart  
somewhere that the level was 1.9. It caused enough  
concern that they wanted to look at him in detail  
for the heart rate over a 24 hour period, so he  
had a taping of his heart rate for that period of  
time called a holter monitor.

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And it was found that his rhythm, sinus rhythm, was the usual normal rhythm, but he had episodes of what is called junctional bradycardia. When the pacemaker shifts from the sinus region to the junctional region the heart slows automatically, and he had periods, short runs of that on the Holter tape.

Most of those times you could increase the rate I gather from the nurse's note by stimulation and he had been on a period of holding of digoxin, I believe, during that time, and then it was restarted around the 24th of January.

Then it seems to me in looking at the record between the 25th and the 30th, he started to go into worse failure and he developed a large liver, periorbital edema, meaning around the eyes; his heart rate increased on the 30th, and he had quite considerable respiratory distress, and that was what led to his transfer down to -- back to the ICU, I would think.

They weren't quite sure at that time whether there was an additional element about his lungs because he had some collapse in several segments, several lobes of the lung, and he had still a big liver, so I think the purpose of the trip to the Intensive Care Unit was to give him more intensive physiotherapy than they could perhaps manage on the ward and to adjust, perhaps,





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his medication, anticongestive medication.

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From then on, in those last few days, when he came back, I think the only point I see there is that his temperature was a bit unstable. He was recorded as having a temp as low as 36 degrees, which in a baby of this age and with these sorts of problems is something for concern.

It really makes one a bit worried about whether he has got continuing sepsis or whether there is some central problem, some other difficulty.

By this time he was on total parenteral nutrition, meaning that everything he got was put through the venous route, and that, in itself, of course, is a major problem in small babies. It is the only thing one can do and it is an important step to take but it does add serious risk of sepsis.

I think that on the 3rd he had positive blood cultures for a new and different organism so that I would think everybody would be very concerned about what is going to happen to this baby at that point. Work away to try and overcome all those difficulties but it is obviously a tough situation.

And then the events that are described after that relate to the arrest.

MR. LAMEK: Would this be an





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Rowe, Mr. ex.  
(Lamek)

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L.3

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appropriate time to break for lunch, Mr. Commissioner?

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MR. COHEN: Yes. Until 2:30.

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MR. LAMEK: Thank you.

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NOON ADJOURNMENT

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--- On resuming at 2:40 p.m.

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THE COMMISSIONER: Yes, Mr. Lamek?

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MR. LAMEK: Thank you, Mr. Commissioner.

5

Dr. Rowe, please.

6

Q Doctor, we were talking about

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the course of Frank Fazio in the latter part of

8

January and into February and you had referred to the things that you considered significant in this.

9

Am I wrong, Doctor, in my reading of

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this chart that the course seemed to be very much up

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and down. No doubt the eventual progress is downward,

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but there seemed to be periods of what one would almost

13

think of as remission, do there not?

14

A. Yes.

15

Q If one goes through this course.

16

A. That is right.

17

Q For example, on page 30 there

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is examination there by Dr. Runge. It starts on page

19

29, the day the child goes back from the ICU in the

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first instance, and he refers to the ichthyosis, to

21

the jaundice, and then on page 30 it says:

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"No anemia, no cyanosis, not

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distressed. Low down chest is clear.

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No edema. Spleen tip and 1 centimetre

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liver edge noted. No other organ  
megaly."





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At that stage the child seems to be doing reasonably well without any gross problem, but I agree it goes down and it goes up again and the course is really rather all over the place, but I agree the message is it is on a downward course.

On the 16th, page 38, there is one of those rather mixed reports, I think, is there not?

The nursing note, 7 o'clock in the evening, 16th of January, vital signs all seem to be reasonably good, regular. Apex regular. Respiration regular.

Well then there is blood noted in the stool of this child. Does that suggest to you some kind of GI infection or what might that be indicative of?

A. It might be - it was frank blood so it might be an infection. It might be something local near the anus or something like that.

Q. So these specimens were sent to Biochemistry and Bacteriology?

A. Yes.

Q. So he seems to be sort of one step forward and a step and a half back most of the way, does he not?

A. Yes.





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Q. And the pattern of stability and instability of the heart rate and respiration continues over the third and into the fourth weeks of January.

Dr. Runge notes on January 19th, page 42, when he is questioning the possibility of some entrocolitis?

A. Yes.

Q. Occasional episodes of increased and decreased heart rate. His abdominal girth, that seems to be fairly steady at the time. Chest, good air entry to all areas.

No crepitations, no wheeze. So he seems to be up and down, in and out of his problems, does he not?

As far as the digoxin levels are concerned - you have referred to them, Doctor; I don't think I need to take you to the lab reports. There are four reported: on January 7th, January 12th, January 13th and January 26th, and they range between 1.5 and 1.8.

There is nothing there to cause any alarm, is there?

A. No.

Q. Then on January 20th there is





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that episode of bradycardia. It is on page 45 of the chart. The note in the middle of the page:

"Apex became irregular at 0900 hours; a rate of 106. At 0930 monitor showed 69 ... "

and when listened, child was in fact bradycardic and had a very drastic slow-fast irregularity.

That continued for a period of time.

Then respirations, fairly stable in that period. It is a rather mixed bag of symptoms this child is showing all the way through, isn't it?

On January 29th, on the other hand, (page 59), he became tachycardic. 7 o'clock in the morning on January 29th, 138 to 200 is his apex.

MR. SCOTT: Where are you now?

MR. LAMEK: Page 59.

Q. "Apex 138-200. Slow-fast irregularity, apex stable until 0230. Since then elevated over 170 - up to 180 ... monitor showed up to 211 and over 180 since 0400 hours."

His respirations were shallow and irregular.

Dr. Tucker who prepared the last chart that we looked at on page 62 was asked to see this baby on January 30th and is a very different







AA.5

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report from the one she gave on Janice Estrella  
shortly before that child's death - here:

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"Baby pale and clammy, marked  
respiratory distress. Pulse 206 and  
irregular. Lung collapse, right lung.  
Left lung low lobe consolidation."

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A rather distressing note --

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A. Yes.

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Q. -- the doctor has on that

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occasion?

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A. Yes.

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Q. And then when he goes to the ICU,

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January 31st, page 64, there is reference to  
deterioration. Afternoon or evening. Page 64.

14

A. Yes.

15

Q. By the next day, page 65, he is

16

stable again according to the ICU note. The bottom of  
the page, "remains stable", and they planned to send  
him back to the floor in the morning again.

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When he does return to the floor  
(page 68) he starts to demonstrate some seizure  
activity.

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Do you attach any significance to that,

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Doctor? The middle of page 68:

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"Beginning about 1830 Frank began to

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And then a little lower down:

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"take spells exhibited by tachycardia,  
180-200; respirations increased 70  
plus. Very irregular with frequent  
apnea 1-2 seconds and grunting."

"Very upset during spells with body  
rigid and limbs extended. Spells  
lasted about 10 minutes and then  
quiet down and vital signs would  
stabilize slightly."

Do you attach any significance to  
that seizure-like activity that he seems to be  
exhibiting on the 2nd of February?

A. I think the report is something  
you would attach significance to. I don't know that I  
can tell from that what it means. We would be  
remembering that there were problems in the Intensive  
Care Unit which raised the possibility by the  
neurologist that there was some asphyxic background to  
that.

Q. Yes.

A. So I suppose that might be  
related.

Q. The same behaviour was exhibited  
apparently later on the same day. On page 69.





AA.7

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Observation, at the top of the page,

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"Arching neck and back, irritable.

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Sepsis. Seizures."

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Then we come to the arrest. We go to

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page 72 first, to Nurse Nelles' nursing note. It

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starts at the top of the page, 1900 to 0330; 1900 on

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February 3 to 0330 on February 4th. He seems to be in

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one of his more stable looking periods, does he not?

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Apex from 133 to 156 and regular. Respirations 36 to

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44 and easy with no indrawing. Temperature stabilized

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at 37.

13

When father phoned at, what is that,

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8:30, told the baby was sleeping and was stable.

16

Behaviour - child appeared comfortable. Slept well

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until 3:30.

18

A. Yes.

19

Q. At that stage he seemed to be

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quiet and reasonably stable, does he not?

21

A. He does seem that way.

22

Q. Yes. And then 3:30, a very

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sudden change:

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"Child became upset and crying. Apex

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about 160 about 0330. Seemed to

settle down a bit."

And then about 3:45 monitor went off.







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A. Yes.

Q. Listened to him. Found to  
have an apex of approximately 50 which was irregular.  
Called 8:23 for Dr. Tucker. Baby breathing on his own.  
Oxygen of 100%. Was bagged. Apex remained bradycardic  
and irregular. About 10 minutes.

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Approximately 4:15 baby had periods of ventricular fibrillation interposed with bradycardia and vast irregularities. Code 25 was called.

And then we go to page 71, the bottom of the page is Dr. Mount Stephen's arrest note. When he got there in response to Code 25 the child is in ventricular fibrillation. He tried defibrillation and the result is no heart beat at all. No response when he incubates the child, gives him sodium bicarbonate.

A. Yes.

Q. Adrenaline, calcium gluconate. Adrenaline directly into the heart, no response, and they terminate the resuscitation.

So, Doctor, although we've got this decline that you outlined, fairly outlined in the thing, there are intermittent spells when the child seems to be either gathering his strength or getting a bit more stable and then the decline begins again, but the arrest again is very sudden, isn't it?

A. Yes, it is.

Q. And when it does come it comes quickly and progresses quickly?

A. Yes.

Q. When did you first review





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this child's chart, Dr. Rowe?

A. I'm not sure when I first reviewed that chart. I think that Dr. Freedom or Dr. Olley probably would have been the first ones to review it at the morning conference, and then there would have been some discussions then about that and I would have had his report.

Q. Yes.

A. I don't think I reviewed the chart specifically at that time.

Q. Did you review it at any time before the summer of 1982 when you told me you and Dr. Freedom went through all these charts?

A. No, I don't think so.

Q. All right. Now, when you looked at it in the summer of 1982, did you then form an opinion as to the probable cause of death of Frank Fazio?

A. Well, I think that already we had the opinion of the cardiologist at that time.

Q. Yes.

A. Who felt that this was compatible with a patient who was septic and who had congestive failure. There seemed to be good medical grounds for that consideration. Of course,





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obviously by October of '82 there were other factors entering into this issue. We didn't have any information about any other data that would have helped in that decision.

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Q. What were the other factors that were entering into it by October of 1982?

8

9

A. Well, by October of 1982 there had been all the rest of the March deaths and the consideration of murder.

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Q. Yes. But with all those considerations by then in the picture and no doubt in your mind in the sense that you were aware of them.

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A. Yes.

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Q. Did you at that stage come to an opinion as to the probable cause of death of Frank Fazio?

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A. Yes, I think that we thought that the death was due to sepsis and heart failure.

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Q. And have you had any occasional cause to revise that opinion at any time since then?

A. Not on any grounds that I know.

Q. And other than in the biochemistry reports in the chart itself, are you aware of any other digoxin level information with







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respect to Frank Fazio?

A. I don't believe there is any.

Q. May we then, Doctor, move  
to ---

THE COMMISSIONER: Before you leave  
it, isn't this the one where we just had the  
small diagram?

MR. LAMEK: Floryn is the one I'm  
moving to. We seem to have Fazio's appeared.

THE COMMISSIONER: Yes, I noticed  
that. I just wondered if we should make it an exhibit?

MR. LAMEK: Yes indeed,  
Mr. Commissioner. If you wish to make the large  
one an exhibit, I would be glad of that.

MR. LAMEK: We've got a coloured  
one coming now, Doctor.

Now, the next death in chronological  
sequence is that of Bruce Floryn. He was born  
January 24, 1962 and the date of his most recent  
admission to the Hospital was January 27, 1981 and  
he died in the Hospital at 6:30 in the morning of  
February 7th, 1981.

Doctor, although the chart is a  
very thick one, that reflects the history of this  
boy's involvement with the Hospital, does it not, and





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our real concern I think is with the first 150 pages which cover his last stay in the Hospital, yes.

Q. Now, Bruce Floryn was 19 years old when he died and he was not a stranger to the Cardiology Wards at the Hospital for Sick Children and he had a history, had he not, of congenital heart disease?

A. Yes, he did.

Q. Now, once again we have a diagram apparently of Bruce Floryn's heart. Does that accurately set out the anomalies in that heart, Doctor?

A. As close as we can perhaps make it on a diagram.

Q. Okay, thank you. May that be the next exhibit please, Mr. Commissioner.

THE COMMISSIONER: Yes, that's Exhibit 99.

---EXHIBIT NO. 99: Heart Diagram of Bruce Floryn.

MR. LAMEK: Q. Could you describe the anatomy of the heart for us, please?

A. Yes. This young man has, as his congenital defect, complete heart block. There were not anatomic deformities of the septa or





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2 the great arteries or the connections of vessels to  
3 the heart. The problem lay in the conducting system  
4 which we have attempted to outline here, in the  
5 sense that the yellow portions represent the conducting  
6 system of the heart.

7 If I could just start up here at the  
8 sinus node, this is the primary transmitter of the  
9 heart and it sends off signals which travel across  
10 the upper chambers. There is a relay station at  
11 the AV node, atrio ventriculo node from which there  
12 is a distinct conducting nerve, as it were, that  
13 comes down into the septum between the two ventricles  
14 and divides into two main branches which supply the  
15 ventricles.

16 In congenital complete heart block,  
17 there is an interruption which is usually in the  
18 nerve itself but sometimes affects the area around  
19 the node. So that there is an interruption in the  
20 integrity of that pathway, which means that this  
21 portion up here keeps beating at its regular rhythmic  
22 rate but the signals can't be transmitted through  
23 the interruption in this area here so that the heart,  
24 the pumping chambers of the heart take up their own  
25 rhythm and it usually means that the rate that is  
discharged electrically up here would be somewhere,







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say, 120 beats per minute, or signals per minute,  
and the rate of the ventricle itself, when it is  
slower, and when it generates its own rhythm it is  
only at around 60 a minute.

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If you are born with that arrangement,  
and the exact reason why one might be born with that  
is not very clear, it's that in some places it's a  
developmental defect and in others that there might  
be some infection during the pregnancy that affects  
that area. But in any event, after birth the top  
chambers of the heart beat twice as fast, or more,  
than the bottom chambers.

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What determines how well an individual  
will do with this condition is what the natural rate  
is generated at beats per minute in this area here.

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So that a new born infant who was  
running at a heart rate of 120 and had a ventricular  
rate of only 30, then the prognosis is extremely bad  
without the insertion of a pacemaker.

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If on the other hand the heart rate  
is over 50, then it usually means that the individual  
can function fairly well. His heart rate is not going  
as fast as the normal, but his heart works perfectly  
adequately. It gets a little bigger because it has  
a slower rate and has to pump the same amount of blood





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3 as someone with a faster heart rate, but it pushes  
4 out more with each beat as a consequence of the  
5 slower rate.

6 So, until the rate gets critically  
7 slower, people can go along with this arrangement.  
8 That is assuming that there is no other abnormality  
9 inside the heart and at the beginning it is sometimes  
10 difficult to be sure whether there isn't some other  
11 anomaly of the heart as well, although, many children  
12 have no other abnormality at all.

13 In this boy's case, as I gather from  
14 Dr. Olley's comments to me, he was born with complete  
15 heart block and he had no problems with that until  
16 he was around about six years of age.

17 He at that time was studied to see  
18 where the level of the block was, to see if that  
19 might help the prognosis for him, because the higher  
20 the level of block the better things are. When that  
21 was done during the course of the study it was found  
22 that his left pumping chamber had some abnormalities  
23 of pressure, which indicated that the left chamber  
24 was not working as effectively as a normal chamber.

25 So, at that point, it was considered  
likely that he had some additional problem with the  
heart muscle, a cardiomyopathy, a muscle disease.









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2 Now, it's not clear what that was,  
3 but it is not altogether unknown to see those in  
4 combination.

5 A bit later he had to have a pace-  
6 maker insertion and he had to have some pacemaker  
7 changes, battery changes and so on. But the real  
8 problem with him was that his muscle disease  
9 advanced and by the time he was, I think 17, he  
10 was admitted in heart failure and diagnosed as having  
11 what is called a congestive cardiomyopathy, meaning  
12 it is just a term for cardiomyopathy in which there  
13 is heart failure as well, and that condition has a  
14 very poor prognosis. So, it was a rather grim  
discovery at that time.

15 So, he really had the pacemaker and  
16 then he was treated for this other condition. The  
17 arrow here represents the fact that as the congestive  
18 cardiomyopathy became worse, then the mitral valve  
19 failed to open and shut normally, particularly failed  
20 to shut because of the stretching of the whole of  
21 the apparatus of the valve due to the enlargement of  
22 the left side of the heart and as that got bigger and  
23 bigger, we got more failure and so he just became a  
24 problem in chronic heart failure of intractable nature;  
25 his pacemaker working satisfactorily all along.







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Q. Dr. Rowe, thank you.

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In looking at his course in his last stay in the Hospital for Sick Children, it may I think be sensible to go back to his penultimate admission. The discharge report there is at page 152 of the chart, but it sets out the boy's condition just prior to the time that he came in for the last time, does it not?

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A. Yes.

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Q. He was admitted in November of 1980, the 18th of November, and stayed for one month and was discharged on December 17th, 1980, again, about six weeks before the time of his final admission.

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At that time, as I read that discharge report, Doctor, he had been admitted, had he not, for the investigation of lesions on his knees and elbows and it was thought that they might be associated in some way with the medication that had been prescribed for him. Do I understand that report all right?

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A. I'm not quite sure of that. Yes, I'm sorry, you're right.

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Q. And it was clear, or it

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is clear to me at least, from the Discharge Report of

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that earlier admission that he was then recognized as

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being in heart failure, severe heart failure. An

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attempt was made to control that heart failure by

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adjustment to the medications that he was on, and he

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was discharged, I take it, with no great hope there

9

would be a lasting control, in the middle of December

1980?

10

A. That is true.

11

Q. Then he came back in again

12

for the final time on January 27, 1981, and perhaps

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we could look at the death report there. It is at

14

page 79 of the chart.

15

It seems he had progressively

16

and increasingly been retaining fluids for the ten

17

days prior to his admission, and that, I take it, was

related directly to his heart failure difficulties?

18

A. Yes, that was the case.

19

Q. He had a greatly enlarged

20

liver, swelling. He had been on digoxin and lasix

21

but, clearly, I take it, Doctor, those had not

controlled his heart failure?

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A. No. He had been on

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additional measures as well; vasal dilator therapy,

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which is another stage of therapy, which was not  
working either.

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Q. But he was admitted and  
treated with lasix IV and, initially at least, there  
seems to have been some measure of success there;  
diuresis and a little reduction of some of the swelling  
and enlargement of organs.

He underwent a cardiac catheteriza-  
tion on January 30 really to see if he could possibly  
be regarded as a candidate for heart transplant, was it  
not?

A. That is right.

Q. And his parents were  
attempting to make some arrangement to have him  
accepted for a transplant program in the United States?

A. That is true.

Q. Unhappily, it was con-  
cluded that he was not a suitable candidate and, there-  
after, the course of the heart failure, I take it,  
was inevitable? There was nothing really that could be  
done for him, was there?

A. Not really, except to make  
him comfortable and continue with what they were doing.

Q. Indeed, if one were to  
turn to page 98 of the chart, on February 3, 1981,







1  
CC4 2 Dr. Olley wrote the order: "Please do not resuscitate."

3 In other words, this was to be a  
4 maintenance operation, support and keeping the  
5 boy as comfortable as possible?

6 A. Yes.

7 Q. In the course of his  
8 decline, as I read the note in the chart, he became  
9 increasingly disoriented. He had a fall in the early  
10 morning of February 6 - that appears in the nursing  
11 notes at page 102 - after which constant care was  
12 ordered for him.

13 Subsequently, the next day, with  
14 his parents' participation in his care, that was  
15 changed to shared care, was it not? But, as the  
16 days went by, he became increasingly drowsy and sleepy  
17 and unresponsive and, on page 104, on February 6, he  
18 appears, does he not, to be in very serious shape;  
19 no urine output for 11.5 hours, very drowsy.

20 What is Brompton's Cocktail, please?

21 A. That is a mixture that is  
22 named after the Brompton Hospital in London, and it  
23 is a mixture which contains morphine and other  
24 narcotic agents and is usually administered to people  
25 who are terminally ill and having a lot of discomfort.

26 Q. His pulse is at 60; poor





1  
CC5 2 volume. Does that mean poor output?

3 A. Yes, weak.

4 Q. Weak. His liver extends  
5 6 cm below the right costal margin, and the impression  
6 of Dr. Runge is "progressive end stage, cardiac  
7 failure".

8 Page 105, the top of the page,  
9 ten o'clock in the evening on February 6, the same  
10 sad story is there, is it not?

11 A. Yes.

12 Q. The young man who is just  
13 going steadily, and indeed not too slowly, downhill,  
14 as I read that.

15 Now, at 6:10 in the morning of  
16 the 7th of February, the lower half of the page, it is  
17 reported "sudden marked change in respirations, in-  
18 creased cyanosis; unresponsive, very shallow, weak  
19 ineffective respirations; Dr. Runge paged."

20 I confess, Doctor, I have some  
21 difficulty with the adjective "sudden" there because  
22 I read above, earlier in the morning of the 7th,  
23 "shallow respirations". He was not breathing very  
24 effectively at that stage.

25 Do you have any comment on the use  
of the word "sudden" at 6:10 to indicate that his





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respirations are now shallow, weak and ineffective?  
They do not seem to have been steady, strong and  
powerful before.

A. No.

Q. In any event, Dr. Runge  
arrives five minutes later and, upon arrival, he finds  
no pulse, respirations undetectable, pupils fixed  
and dilated and the patient is pronounced dead at  
6:30 in the morning.

I suggest, Doctor, that the only  
word or event in that whole downward progress that  
was at all out of character with the steady decline was  
the use of the word "sudden" in the note at 6:10 in  
the morning of February 7th. For the rest, do I  
characterize this fairly to say that the process is  
almost one of slipping away over a period of days;  
the boy is getting weaker and drowsier and less  
responsive as time goes by; quietly but perceptibly  
becoming weaker? Is that fair?

A. Yes. I am not quite sure  
when he started the Brompton Cocktail. I think it is  
the 6th.

Q. Well, there is a reference  
to it on the 6th, at eleven o'clock in the evening.

A. Yes. The point I just





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wanted to comment on there was that it would be  
difficult to have much change in your condition if  
you are under rather large doses of narcotics.

Q. Yes.

Well, the note at the bottom of  
page 104 is: "Hold Brompton's, review in the morning".  
So, there may not have been a repetition at least of the  
dose overnight. Who knows.

But I take it, Doctor, it is clear  
from a reading of the chart that this boy was dying?

A. Yes, I think so.

Q. The parents apparently  
were notified of the deterioration. That is right  
at the end of that note at 6:10 on the 7th of  
February: "Parents notified by telephone at 6:10 of  
deteriorating condition."

Doctor, this is, is it not, quite  
unlike the terminal events that we saw, for example,  
with Estrella? There is no evidence here of any  
symptoms consistent with digoxin intoxication, is there?

A. I do not see any there, no.

Q. Certainly, there is not  
the rapid and irreversible decline and dramatic events  
that we saw in cases like that of Estrella? It was  
irreversible all right but not very dramatic in the way







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CC9 2 This is a baby who had a variant  
3 of hypoplastic left heart syndrome. That is, the  
4 left ventricle is very small compared to the huge  
5 right ventricle. The aorta was very, very narrow.  
6 Its dimension, as measured, I think, echocardi-  
7 graphically, was 4 mm; so, it was very, very small.

8 It is shown here that there is an  
9 atretic aortic valve, that is, no opening. But, in  
10 fact, although that was the clinical diagnosis, the  
11 post mortem did show -- the pathologists were able to  
12 show that there was a 1 mm orifice in the valve. But  
13 for practical purposes, that makes no real difference.

14 So, this is a hypoplastic left  
15 heart syndrome in which blood comes into the right  
16 side of the heart in the usual way, goes down into the  
17 right ventricle, is pumped out into the pulmonary  
18 arteries and also goes through the ductus arteriosus  
19 and goes backwards down to the aortic valve and  
20 on down the descending aorta.

21 When the blood comes back from the  
22 lungs to the left atrium, you are dealing with a very  
23 small mitral valve and a non-compliant tiny, little  
24 left ventricle. So, though there is an opening here,  
25 really no significant blood would be coming through  
this chamber, no significant amount of blood. So,





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1  
2 that Estrella was.

3 Was it ever suggested by anyone,  
4 Doctor, to your knowledge, that the cause of Bruce  
5 Floryn's death was anything other than the congestive  
6 heart failure that he had, congestive myopathy?

7 A. I do not believe so.

8 Q. We come next, then, Doctor,  
9 to Jennifer Thomas. She was born on February 3, 1981.  
10 She was admitted to the Hospital for Sick Children on  
11 February 11, 1981 and died at 3:38 in the morning of  
12 February 12, 1981 in Ward 4A.

13 Once again, Doctor, can you tell  
14 me whether the diagram that sits behind you and to  
15 your right reasonably accurately depicts the anatomy  
16 of this child's heart?

17 A. Yes.

18 MR. LAMEK: May that be the next  
19 exhibit, please, 100?

20 THE COMMISSIONER: 100.

21 --- EXHIBIT NO. 100: Heart Diagram of Jennifer  
22 Thomas.

23 MR. LAMEK: Q. Could you, Doctor,  
24 tell us about the anatomy of Jennifer Thomas' heart?

25 A. I regret that, once again,  
we have made a minor error in the diagram but it does  
not greatly interfere.





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blood really meets a major obstruction in the size of this ventricle and the narrowness of this aorta. So most of it goes through the atrial communication and mixes with the blue blood on this side.

So, again, you have a mixing of blue and red blood in the right atrium, which goes down to the right ventricle, out into the pulmonary arteries, and the method of profusing the rest of the body through the aorta is dependent upon the existence of a patent ductus arteriosus. So, it is a ductal-dependent lesion of a hypoplastic left heart.

At the autopsy, there were some additional abnormalities in the evidence that, in the left ventricle, there were some infarcts that were somewhere between 24 and 48 hours of age, but the anatomy is hypoplastic left heart syndrome, for which one would expect, under the ordinary course of events, inevitable death.

Q. Dr. Rowe, this child had a very short hospital course at the Hospital For Sick Children. She had been born at St. Joseph's Hospital in Hamilton, I think, and it was discovered there, at page 8, there is a consultation record of Dr. Peer in Hamilton. It was discovered there that she had a heart murmur which grew more intense over her first







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few days. She developed a rapid respiratory rate  
and the liver size increased, became enlarged, and she  
was transferred to the Hospital For Sick Children on  
February 11th.

(N.B. Page 2769 follows)





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Once again, Doctor, can we reasonably rely upon the discharge report at page 56 for an overall summary of her course at the Hospital?

A. Yes.

Q. There after admission she had an electrocardiogram, an echocardiogram and they disclosed I take it those problems that you have described as being known prior to autopsy in any event?

A. Yes.

Q. And it was proposed that she should have surgery as soon as possible. That appears on page 73 of the report. A note by Dr. Runge again:

"The echocardiogram disclosed hypoplastic left heart, an atritic ascending aorta.

"Plan: Digitalis, diuretics, IV therapy, including prostaglandins. Surgery ASAP."

It was essential I take it to get this child into surgery as quickly as possible, and indeed surgery was scheduled for the next day, February 12, was it not?

That appears on page 76. The first note on the page.

A. Yes.





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Q. "Surgery tomorrow", and more particularly from page 83 where the parental consent to the surgical procedure records the date booked for this procedure is 12 February, 1981?

A. That is true.

Q. So essentially I take it, Doctor, this child was being treated as a candidate for emergency surgery?

A. For heroic surgery.

Q. For heroic emergency surgery, thank you.

And she was admitted to Ward 4A?

A. Yes.

Q. Digitalizing doses of digoxin were prescribed, together with diuretics and prostaglandin was started I take it to keep the ductus open?

A. That is right.

Q. But she soon developed irregular respiration, - back to the discharge report, and on page 78 of the report, progress note, February 11, she developed an irregular heartbeat.

In the early part of the night it seems the - page 78 - the heartbeat was regular but then it became irregular. She went into arrest and couldn't be resuscitated.





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A. Yes.

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Q. And she therefore, after very  
few hours in the Hospital, died?

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A. Yes.

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Q. Now, Doctor, what in your  
judgment is significant in this chart for an under-  
standing of Jennifer Thomas' death at the time and  
in the manner that she died?

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A. Well, I would just comment that  
it is not very often that we undertake surgery for  
this condition. You have heard me speak before of  
similar malformations in which nothing was done  
although there were some considerations from time to  
time.

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This baby - apparently the operation  
would have been discussed with the family as soon as  
the diagnosis was made, and they were given the option  
of the attempt.

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It is very heroic surgery, as I have  
said, and it would therefore be, the situation under  
those circumstances, that there would be some effort  
made to reduce the degree of heart failure, and that  
was why the digoxin, lasix and aldactazide were given  
in addition to prostaglandin.

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Part of the problem was that the baby







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developed secondary effects of the prostaglandins which had to be reduced in dosage, and when the dosage has to be reduced there is a risk that the ductus will begin to close, and if that happens everything starts to deteriorate.

I would think that it is conceivable that that was the way in which this baby proceeded and the terminal events would be related to that.

Q. Well, the information that did not become available to you until autopsy, was that information of significance in assessing the death of this child?

A. No, I don't believe so.

Q. It was sufficient in what was already known?

A. Yes, it was.

Q. All right.

A. I think that the infarcts that are discussed are the sort of thing that can initiate a rhythm problem, but I would judge from the clinical picture the most likely possibility for the mode of dying was the closure of the duct, or the contraction of the ducts so that very little blood was getting out to the rest of the body.

THE COMMISSIONER: Did you say the contraction of the --





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THE WITNESS: The contraction or constriction of the ductus so that either it was completely closed off or very little aperture was remaining through which blood could get around to the vital organs of the body, including the heart.

MR. LAMEK: Q. Doctor, at autopsy it was discovered that the duct had an opening of 7 millimetres.

Can you tell me whether that represents some closing or whether the duct was still fully patent? That is at page 50.

A. Yes. Well, I think that there is always a discrepancy between the anatomic findings and the functional findings.

There is a substantial amount of work in that regard experimentally, and it shows that you can close the ductus so that no blood gets through it and yet at autopsy (and I am talking about animal work) the ductus is moderately widely open. So this is related perhaps in part to the age of the patient and the way in which they die.

Q. Doctor, why was Jennifer Thomas considered as a candidate for this heroic surgery? You say this is the kind of surgery you do not often undertake.





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What was there about this child that made her a candidate?

A. I think that it may have been a number of factors.

This operation can only be done by the surgeons when there is an appropriate period for them to do it, and also there are rather stringent criteria about the status of the baby in terms of the blood work and other things that will affect, in their opinion, the outcome.

There is such a low risk of survival from the operation that that is why we call it heroic, but nobody is prepared to do the operation unless the conditions are near optimum in their view of proceeding, so that there are decisions that are made between the cardiologist and the surgeon that might not be reflected in the chart.

Q. Doctor, you told me that the scheduling of the surgery for the day following the child's admission indicates that the case is being dealt with on an emergency basis.

Could one infer, however, that the child was at least expected to survive long enough to make it to the OR on February 12th?

A. I don't think they would ever







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do this operation as an emergency procedure. It would have to be done on the basis that if the baby survived to that point they would go ahead.

Q. Do you see any indication in the chart of any question or any expectation that the baby might not make it until February 12th?

A. I don't see any record to that effect, but I think that with this malformation you can't ever tell.

Q. Will you look at page 78 of the report, Doctor, the terminal events, and may we start with the note for the long night nursing shift that began on February 11?

A. Yes.

Q. And that is Nurse Scott's note I think. We have got to turn over to page 79 to find that.

A. Yes.

Q. She recorded that apex is 180 to is that 140?

A. Yes.

Q. 140 and regular until 3 o'clock in the morning?

A. Yes.

Q. Temperature 38, 39, 38.8, 38 at 2 o'clock in the morning.





DD.8

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Is that slightly elevated?

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A. Yes, that would probably be

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from the prostaglandins.

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Q. Respiration was very irregular

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and shallow, ranging from 96 to 82.

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Records blood pressure.

8

"Colour - left hand and right leg  
extremely cyanotic and cool to touch.

9

"Nutrition - feeds eagerly ...

10

Tolerated feeds. One and a half hours

11

after 2300 hour feed, vomited approxi-

12

mately 20 cc's, mostly mucus. Baby

13

was put on nothing by mouth.

14

"Elimination - voided four times

15

urine with ... stool each time. Around

16

2 o'clock in the morning there was

17

blood from vagina."

18

Goes on to refer to the IV;

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prostaglandin that is infusing by IV. The rate of  
infusion there and then goes on to the arrest.

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At 300 hours, 3 o'clock in the

21

morning:

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"Baby's apex became irregular. Rate

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was down to 140 to 130 and quickly

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went into atrial flutter.

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"0306 cardiopulmonary resuscitation  
was initiated while Code 25 was  
called.

"0308 arrest team called.

"0310 arrest team arrived.

"0312 baby defibrillated.

"0317 intubated."

It refers to the note and the drug sheet and says:

"0332 baby was pronounced dead."

And then Dr. Heilbut's note on page 77,  
the lower half of the page:

"Jennifer apparently developed an  
irregular rhythm and bradycardia at  
3:10 in the morning. Went into  
ventricular fibrillation and was  
therefore defibrillated. Routine  
cardiac resuscitative measures were  
instituted but to no avail.

"Time of death 3:38 a.m."

It is almost a pattern we have come  
to recognize, those terminal events, isn't it, Doctor?

A. Yes, it is.

Q. Very sudden onset of them?

A. Yes.

Q. Very rapid course. Vomiting at





DD.10

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12:30 in the morning, arrhythmias, bradycardia to  
ventricular fibrillation.

3

4

Are those events, their onset and  
their course consistent in your judgment with digoxin  
intoxication, Doctor?

5

6

A. Yes, they are.

7

8

Q. Are they consistent in your  
judgment with the child's anatomical and clinical  
condition?

9

10

A. Yes, they are.

11

12

Q. Does one have to posit a closing  
or a constricting of the ductus in order to find that  
consistency?

13

14

A. Yes.

15

16

Q. Understanding what you have  
said, Doctor, about the anatomical observation and  
the function, is there anything on the chart other  
than the mode of death which would be consistent with  
it, is there anything in the chart to indicate that  
the ductus indeed did close or did become constricted?

17

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A. It would have to be that  
mechanism I believe.

21

22

THE COMMISSIONER: I am sorry?

23

MR. LAMEK: Q. I am sorry?

24

A. It would have to be that

25







DD.11

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mechanism to account for what I am saying.

3

Q. But is there anything in the

4

chart to indicate that that is what happened other  
than the events, the terminal events?

5

A. No.

6

Q. Doctor, when did you first

7

review the chart of Jennifer Thomas? Was that also  
the summer of 1982?

8

9

A. Yes. That would be the time

10

with Dr. Freedom. I would not have reviewed it

11

formally prior to that. I would have had the report  
from the cardiologist the next day.

12

13

Q. Did you observe at that time

that the terminal events were consistent with digoxin  
intoxication?

14

15

A. I don't remember that we did.

16

Q. You have told me that by the

17

time you and Dr. Freedom conducted your review in the  
summer of 1982, or the early fall, whenever it was,  
that there were different considerations in the  
situation?

18

19

20

A. Yes.

21

Q. And with those different

22

considerations in the air, did it then occur to you  
that the terminal events of this child were if not

23

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DD.12

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suggestive of at least consistent with digoxin

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toxicity?

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A. I am not sure that we specifically

5

talked about that with Jennifer Thomas, but I think

6

with every patient after the event that would have to

7

be a consideration.

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Q. Now, is the opinion - I'm  
sorry, let me be clear. It is your opinion that  
the most probable cause of death of Jennifer Thomas  
was the closing or constriction of the ductus  
arteriosus?

A. Yes, I thought that was so.

Q. And when did you first form  
that opinion?

A. At the time of the...

Q. In the summer of 1982?

A. Yes - no, at the time of the  
death.

Q. Oh, I'm sorry, the review  
the following day?

A. Yes.

Q. Yes. And have you at any time  
since the early part of 1981 reviewed or reconsidered  
that opinion?

A. Not specifically for her, but,  
as I say, after March, the question of whether there  
might have been other causes of death had to be  
accepted.

Q. Forgive me, Doctor, I don't  
understand that. You say the question of whether  
there might be other causes of death. I take it you







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mean specifically the possibility of digoxin intoxication?

3

4

A. Yes.

5

Q. Had to be contemplated, I

6

suppose?

7

A. Yes.

8

Q. But what does that mean in

9

terms of your going back and thinking about particular cases in which you had ascribed to the cause of death

10

something other than digoxin intoxication. Did you,

11

in that new situation after March of 1981, go back

12

in your mind and say, okay, there is a case that is

13

entirely consistent with digoxin intoxication and

14

did you then go back and review the facts of

15

particular charts at all?

16

A. No, I didn't do that. I think

17

we accepted the fact that any death might have been

18

the result of digoxin intoxication at that stage;

19

that was during the course of the investigations.

20

Q. Any death, Doctor?

21

A. Yes, yes.

22

Q. Including a death like Bruce Floryn?

23

MR. SCOTT: Let him finish.

24

MR. LAMEK: I'm sorry.

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THE WITNESS: I think we can't say that Bruce Floryn might not have had a death like that from digoxin. He was under a cocktail which is known to depress things, he was under a "Do not resuscitate" order. The numbers of observations on him would not be as high as they would be on somebody who was not expected to die. I think there might be a number of reasons why the observations from one patient to another might be different, but the fact is that after the investigations were started, the question was obviously raised and I don't think we could exclude the possibility.

MR. LAMEK: Q. Well, I have two questions from that, Doctor. One, and believe me, I don't mean to be argumentative, but is it not one thing to see in the case of, for example, a Janice Estrella or even a Jennifer Thomas, terminal events which are recognized as being consistent with digoxin intoxication, although not necessarily indicative of it, consistent with it?

A. Yes.

Q. And in the case of a Bruce Floryn, having no observations of anything that is known to be or are regarded as being consistent with digoxin intoxication, you were saying the events may





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have been there but they weren't observed?

A. Yes.

Q. Doctor, is not the case for suspicion wondering greater where the consistent symptoms have been observed than where they have not?

A. Bruce Floryn's heart, as I understood it, stopped.

Q. Yes.

A. Which is consistent with digoxin poisoning.

Q. Yes, so it is. But, Doctor, am I entirely wrong that the known symptoms of digoxin intoxication are arrhythmias. Is that one of the known symptoms of digoxin intoxication?

A. Yes.

Q. ECG changes?

A. Yes.

Q. Of a particular kind?

A. Yes.

Q. Vomiting?

A. Persistent vomiting.

Q. Yes. Are there others that are known to be symptoms of digoxin intoxication?

A. Those are the main ones I think.





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Q. Those are the main ones. I suggest to you, Doctor, that his heart stopping is a functional definition of death, isn't it?

A. Yes.

Q. The question is what causes it to stop. Isn't that really what we're concerned about?

A. Yes.

Q. And if he had displayed none of the known symptoms of digoxin intoxication other than he died, or if he has not been observed to display any of the known symptoms of intoxication, of course it is possible he displayed them, Doctor, and they weren't seen. Are you as suspicious of that death as you might be of the death of a child who did display all the known symptoms of digoxin intoxication?

A. No, probably not.

Q. I would not have thought so, Doctor.

A. No.

Q. My second question arising out of your answer is: if you could not, after March, 1981, exclude the possibility of digoxin intoxication, where if anywhere did that recognition







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lead you. What did you do, having said, who knows, they could all have been digoxin intoxication. Where do you go from there, or where did you go from there?

A. We didn't go anywhere from there.

Q. Were you not concerned to try to find out which of those patients may have died of digoxin intoxication?

A. We took the view that this was under investigation and we were available and we wanted to be available to respond in any way we could and we thought we were doing that.

Q. Was it not a matter of some medical curiosity of yours as well, Doctor?

A. Well, I don't know that we had any way that we could decide that point. I mean, there was a police investigation going on, we were not privy to the results of it, and I think for very good reasons. The matter was an ongoing investigation. Obviously we would have interest as to what happened to these babies.

Q. I do need to understand, Doctor. You are telling me this that although after March of 1981 you recognized the possibility that any of these children whose deaths we are now





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considering may have died from digoxin intoxication?

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A. Yes.

4

Q. And although the possibilities

5

in some cases may have been greater than in others,

6

you did not change the medical judgment that you had

7

formed as to the probable causes of their deaths?

8

A. No, we still felt that the

9

explanation that we had given, I think in - I'm not

10

sure that everybody felt that way in every patient,

11

but I think it is generally true, my impression from

12

other cardiologists was that nobody really changed

13

their views about whether they thought the mode of

14

death was compatible with the medical condition of

15

the patient. They simply accepted the fact that

16

in the light of the events in March and the onset of

17

the investigation, that it was very difficult for

18

them to say that it is not due to digoxin.

19

Q. Doctor, do you recall any

20

of your staff cardiologists or Cardiology Fellows

21

saying with respect to any of these ward deaths in

22

the nine month period that in his view digoxin

23

intoxication was a more probable cause of death than

24

that which had originally been suggested?

25

A. I do not recall that.

26

Q. And did you yourself ever come

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to that conclusion with respect to any of these  
children?

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A. I think in one to come we  
may come to that, but not...

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Q. But not in the ones that we've  
dealt with thus far?

8

9

A. None that we have dealt with  
thus far, no.

10

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MR. LAMEK: Mr. Commissioner, we  
started a little later after lunch today. I would  
like to get through one more child today and I think  
I can do it quite easily. It is a slender one. Do you  
want to take a break this afternoon or do you want to  
go straight through. I'm in your hands entirely, sir.

15

16

THE COMMISSIONER: Well, that causes  
me to take another vote. How many would like a break?  
How many would not?

17

18

I don't think I need to take those  
votes any more. We'll take 15 minutes.

19

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MR. LAMEK: Thank you, sir.

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---Short recess.

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---Upon resuming.

THE COMMISSIONER: All right,  
Mr. Lamek.

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MR. LAMEK: Thank you, Mr. Commissioner.





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Q. Dr. Rowe, we are going to go to the next death which I thought was Warner, but in fact it is David Leith. We can deal with Warner out of order if you like.

THE COMMISSIONER: All right.

MR. LAMEK: Q. We have not yet marked that Hospital record as an exhibit, so, I will show you first what I believe to be a copy of the Hospital chart for Colleen Warner and ask you please if you so recognize it.

A. Yes, I do, that is a record of Colleen Warner.

MR. LAMEK: Thank you. May that be the next exhibit please, Mr. Commissioner.

THE COMMISSIONER: Yes, Exhibit 101.

MR. LAMEK: 101, thank you.

---EXHIBIT NO. 101: Medical Records of Colleen Warner.

MR. LAMEK: Q. Now, Dr. Rowe, Colleen Warner was born on October 16th, 1980. She was admitted to the Hospital for Sick Children on March 6th, 1981, and she died on Ward 4A at 3:40 in the morning of March 7th, 1981. You have behind you another coloured diagram, this one purporting to be of the anatomy of the heart of Colleen Warner. Is







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that an accurate representation?

3

A. Yes, I think so.

4

Q. Well, a diagramatic representation of the heart.

5

6

A. I think it is.

7

Q. Thank you. Exhibit 102,

8

please, Mr. Commissioner.

9

THE COMMISSIONER: Exhibit 102.

10

---EXHIBIT NO. 102: Heart Diagram of Colleen Warner.

11

12

MR. LAMEK: Q. And would you describe the anatomy of the heart for us, please, Doctor?

13

14

A. Yes. This was a rather

15

unusual anatomy, meaning by that that the condition, the particular combinations illustrated here are extremely rare.

16

17

There was a large ventricular septal defect between the two chambers of the heart. This in itself is not usual but the association with it of a condition called endocardial fibroelastosis, which is demonstrated by the yellow layer on top of the internal drawing of the left ventricular wall, was the unusual feature.

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The right ventricle was relatively small and it was regarded I think by the pathologist

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3 as being hypoplastic, but the left ventricle was  
4 huge.

5 Normally this is a condition with  
6 just the ventricular defect present, which would  
7 lead to massive left to right shunting and a large  
8 amount of blood going out to the lungs.

9 So, venous blood would come into the  
10 right side, come down into this right chamber, be  
11 mixing with a huge torrent of blood that would have  
12 come across on the left side and then be pumped out  
13 to the lungs, come back to the left side and then  
14 down here and out the aorta, but much of it going  
15 across that' hole.

16 The endocardial fibroelastosis is  
17 a very thick porcelain-like material which lines the  
18 left ventricular cavity completely. It interferes  
19 with the function of the performance of that pumping  
20 chamber so that the pump doesn't move very much with  
21 each beat. Instead of a vigorous powerful contraction,  
22 it barely moves at all.

23 So, the defect is a ventricular septal  
24 defect of large size and associated endocardial  
25 fibroelastosis. There were certain other findings  
at the autopsy which could not be detected from that  
diagram, but which are important in the child's  
illness.





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Q. Thank you, Doctor. Colleen Warner, and I'm referring now to the discharge or death report on page 25 of the record, was referred to the Hospital by a pediatrician because she was not feeding well, failing to thrive, shortness of breath, cough and, as I understand it, congestive heart failure.

On admission on March 6th, am I right, she was not cyanosed but she did have an elevated heart rate, in excess of 200 per minute, and respiratory rate in excess of 70 a minute?

A. Yes.

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Q. An enlarged liver but no heart murmur, but there was gallop rhythm. She was investigated by chest X-ray and electrocardiogram and it was found that she had an enlarged heart, a left aortic arch, I believe. Is that a mistake in this diagram?

A. No. That is the normal --

Q. No. That is right, that is the normal one. That is right.

A. The normal one.

Q. And the diagnosis, as I read it, on page 25, by ECG, was sinus tachycardia versus supraventricular tachycardia, with combined ventricular hypertrophy.

Would you please explain that to us?

A. Well, when the rate gets to be over 200 a minute, especially over 200 or 210, the possibility exists that there may be an abnormal focus rather than the sinus node, and it is very difficult at those extremely fast rates to identify the P waves in the electrocardiogram that would tell you the difference, and I that, I think, was a problem here.

Q. Now, with respect to her heart disease, other than any conduction problem, the







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said, is:  
admission diagnosis it is/"Cardiomyopathy EFE question-  
able". Is that the endocardial fibroelastosis?

A. Endocardial fibroelastosis  
was the -- at the time of admission, there was no  
recognition of the ventricular septal defect.

Q. And congestive heart failure?

A. Yes.

Q. She was given a first  
digitalizing dose because, as I read it, the classic  
treatment for CHF was prescribed; digoxin and diuretics?

A. Yes.

Q. And she was given the  
first digitalizing dose of 0.8 mg and lasix, and the  
heart rate and the respiratory rate both came down  
following that.

The second digitalizing doze of  
0.04 mg was apparently given some six hours later and  
that night, at about three o'clock in the morning,  
she became bradycardic and suffered cardiac arrest;  
could not be resusciated and was pronounced dead at  
3:45 in the morning of March 7th?

A. Yes.

Q. And, again, another very  
short stay in the Hospital, but is that a fair summary  
of the course, Doctor?





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A. It is.

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Q. Again, I ask you the question in this pattern: What, in your judgment, is there in this chart of significance in understanding why Colleen Warner died when and how she did?

A. Yes. I think that, in the Emergency Department where she was first seen, she was taken -- I think she was taken from there to have an echocardiogram performed. I am trying to find the note.

Q. The Emergency Department notes are at page 49, Doctor, but I do not see anything there about going to echocardiogram.

A. Well, there was an echocardiogram done and I will just have to find out where it says it was done.

Yes, I think it is on page 34, there is a report, but I believe that echocardiogram was done -- maybe it was done when the baby was on the way to 4A or while it was on 4A.

The reason that there was no consideration of a ventricular septal defect in the initial examination was there was no heart murmur but the defect was so large that that could have accounted for it.





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In any event, the left ventricle, as you can see there, is reported as "huge and grossly dysfunctional with features of endocardial fibro-elastosis" and the right heart function was only marginally better than the left. So, this would be -- I think that the real feature of that study was the poor contractility of the left ventricle.

So, I think that is the important consideration. I think, at that stage, the diagnosis was discussed with Dr. Vera Rose on the phone, and she felt it was most likely to be a primary endocardial fibroelastosis and she asked for the cardiac fellow to report back to her after the first therapeutic dose had been given of digoxin. I think she was reasonably pleased with the initial response, at any rate.

And then things did seem to be quite stable for a period of time, but at three o'clock in the morning, everything fell apart again.

Q. Well, Doctor, you are referring to the events that are described on page 55 of the record?

A. Yes.

Q. The one nursing note, the note of Nurse Scott?







FF5

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A. Yes.

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Q. And it is for the long

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nightshift beginning at 7:30 on March 6th. She

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records the vital signs of the child at the time of

6

admission and then goes on: "Apex ranging from 136 to  
156 regular", until around 03:00 hours when the "rate

7

rapidly dropped to 72 and very irregular with long

8

pauses; blood pressure down." Dr. somebody was called.

9

Dr. Kantak, is that?

10

A. Yes, Dr. Kantak.

11

Q. At 3:05, the apex was

12

hardly audible. At 3:06, a Code 25 was called while

13

CPR was initiated. At 3:08, the Arrest Team arrived.

14

At 3:18, the baby was incubated and it refers to the

15

CPR sheet and it records that at 3:45 the baby was  
pronounced dead.

16

A. Yes.

17

Q. On page 56 is the Arrest

18

note. It records that at 3:05 they arrived to find

19

the child "in ventricular flutter. Sodium Bicarb. given,

20

atropine, calcium glucomate, adrenalin; defibrillation",

21

and that produced sinus bradycardia with a heart rate

22

of 30. No output. No response to the drugs admininis-

23

tered; still no output. Large heart? Return to,

24

what is that "SVT", "SUT"?

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A.           Supraventricular tachy-

3

cardia.

4

Q.           Thank you.

5

Hour prior to arrest, digitalized.

6

At 45 minutes into arrest, no output; pupils fixed,  
dilated. Resuscitation stopped. That is Dr. Mount-  
stephen's note.

8

A.           Yes.

9

Q.           And the only other note

10

At 03:00, a Code 23 was called. Baby was breathing  
well, does that say?

11

12

A.           Baby was incubated -- Oh,  
I am sorry.

13

14

Q.           I am looking at the first  
line under Code 23 called, 03:00 hours.

15

A.           Breathing well.

16

Q.           Breathing well. Had

17

episode of bradycardia, heart rate 82 to 90, irregular  
on monitor; some episodes where heart rate was 60 to 70;  
oxygen given by face mask, subsequently heart rate  
picked up for a short while. At 3:10, a sudden onset  
of ventricular tachycardia. <sup>was</sup>25/called. The baby was  
incubated and events as written above. EKG during  
period of bradycardia showed junctional rhythm, and  
we have run into that before, and some ST changes .

22

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FF7

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A. Yes.

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Q. Well, Doctor, we have

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trod this path before, have we not, of the sudden

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onset of these symptoms in a child who is apparently

6

stable, and this was a sudden onset from the appearance,  
was it not?

7

A. Yes. I am not sure that

8

I would agree with you that the baby was stable. I

9

think the baby came in that evening with severe

10

congestive failure. It had improved, I think.

11

Q. Oh, yes, it had improved.

12

I am referring to the immediate pre-arrest period,

13

having read Nurse Scott's note of the apex being

14

regular until about three o'clock in the morning.

15

A. Yes.

16

Q. There does not seem to

17

be any indication of concern by her, or indication of

18

distress during the first part of the evening shift

19

or the night shift?

A. No.

20

Q. And the events, once they

21

began, proceeded rapidly and apparently irreversibly?

22

A. Yes.

23

Q. Those events consisted of

24

arrhythmias, sudden onset of bradycardia, ventricular

25





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fibrillation. Defibrillation merely produced more  
bradycardia?

A. Yes.

Q. Junctional rhythm.

There is a suggestion that the  
conduction system of the heart is out of kilter?

A. At that time, yes. This  
is commonly what happens during resuscitation.

Q. And changed ST waves on the  
ECG?

A. Yes.

Q. Again, Doctor, I take it  
those events and their onset and course are consistent  
with digoxin intoxication?

A. Yes.

Q. Indeed, change ST waves,  
conduction system disturbance, arrhythmias, brady-  
cardia, ventricular fibrillation are classically  
symptoms of digoxin intoxication, are they not?

A. They can be.

Q. Yes. Are those events,  
in their course and the mode of their onset and their  
rapidity also consistent with the child's anatomy and  
clinical condition, in your judgment?

A. Yes, I believe that is so.





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Q. Now, no order was given

3

here to take a blood sample for digoxin measurement,  
either during life or at post mortem, was there?

4

5

A. I do not think so.

6

Q. Yes, there was an ongoing

7

order, Miss Cronk reminds me, on page 59.

8

A. Twice a week.

9

Q. That digoxin levels were

10

to be taken twice a week.

11

A. Oh, yes.

12

Q. But no sample had been

13

taken as of the time of this child's death and none  
was -- was there a post mortem? Yes, there was. None

14

was taken at post mortem?

15

A. No.

16

Q. With respect to the first

17

digitalizing dose, Doctor -- I am going to call them  
diging doses from now on, if that is all right?

18

A. Sure.

19

Q. Page 59, it is recorded

20

at the bottom order on the page, that the first

21

diging dose was given in the ER; that is the Emergency  
Department, I take it?

22

A. I cannot read that, but

23

that may be right -- oh, I am sorry, ER, yes, that would

24

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be Emergency Room.

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Q. And the Emergency Department  
record at page 49 records that at 7:25 Dr. Lavi, was  
it --

A. Yes.

Q. -- administered digoxin  
1.6 millilitres by IV push, 0.5 milligrams per milli-  
litre.

Now, the order from page 59 was  
0.08 milligrams IV, the administration, according to  
page 49, is expressed in different units.

A. Yes.

Q. Can you help me, please.  
Are they the same?

A. I do not understand what  
they are doing there.





/EMT/ak

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Q. All right, I got it. He administered 1.6 millilitres of the mixture. Each millilitre contains 0.05, and therefore 1.6 of them would contain 0.08 milligrams, would they not?

A. Yes, I presume.

Q. Okay. Work that one out. Are you able to tell us, Doctor, whether that is an appropriate diging dose for a child of this age and size, first diging dose?

A. Yes. I think I calculated that out to be about 34, 35 micrograms per kilogram. That would be reasonable I think.

Q. Is there a rule of thumb or an accepted dosage per milligram?

A. Well, most people would give about 40 micrograms per kilogram.

Q. So this was a touch on the --

A. There might have been a reason for that. In fact there probably was a reason because of the endocardial fibroelastosis.

Q. Is there any significance to the IV push?

A. No, that is the way the drug is given.

Q. Doctor, just so that we will





GG/jc

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all understand, what does that mean?

3

A. Put it in a syringe and push

4

it in - push the contents of the syringe into the --

5

Q. Into the IV.

6

A. Into the IV, yes.

7

Q. Towards the lower end of the IV

I take it?

8

A. Yes.

9

Q. And the second dose according

10

to the order on page 59 of 0.04 milligrams was to be

11

administered six hours later. That is to say about

12

1:30 in the morning, the first one having been

13

administered at 7:25.

14

I don't see any record of its

15

administration in the medication sheet, Doctor, but

16

if I look at that particular order on page 59 there

17

seems to be two arrows, then 0.04 milligrams times

18

two doses; first dose six hours after and above that,

it is "given by", and I cannot read the rest of the --

19

A. I think that is written by

20

Dr. Ning and then there is a bar and then there is SN.

21

I presume that is Miss Nelles.

22

Q. Thank you. And then the second

dose was to be given six hours after.

23

A. After that.

24

25





GG.3

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Q. No. 2 dose.

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A. Yes.

4

Q. Of course that one was not

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given because --

6

A. No.

7

Q. -- because the child did not

8

survive for that. But what had happened here then

9

was the child had received 0.12 milligrams of digoxin

10

in the 7-1/2 hours preceding the onset of bradycardia,

11

and in the circumstances, Doctor, in the light of the

12

particular nature, onset and course of the terminal

13

events of Colleen Warner, would it in your view have

14

been appropriate to consider the possibility of digoxin

15

intoxication as the cause of death?

16

A. No. At least I would have said

17

that the more likely cause might be related to the fact

18

that the baby had endocardial fibroelastosis.

19

I think that Dr. Rose did consider

20

the possibility. She at least made a point of

21

reviewing the digoxin doses in detail.

22

It was mainly I think not because of

23

the concern about overdose as the concern about unusual

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reaction of a heart that has a cardiomyopathy to

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digoxin because that is an acceptable concern.

Q. Yes.







GG.4

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A. Her conclusion was, however,  
that the doses were appropriate and on --

THE COMMISSIONER: I am sorry, what  
was that, Doctor?

THE WITNESS: Her conclusion was that  
the doses were appropriate and she didn't think that  
it was likely that digoxin had anything to do with  
the actual mechanism of death. So that she ascribed  
this as a death related to the endocardial fibro-  
elastosis malformation.

I think that her later view was that  
the possibility of a viral background for that also  
existed.

MR. LAMEK: Q. When did Dr. Rose  
consider the possibility of digoxin involvement in the  
death because of the --

A. I think the next morning.

Q. I see.

A. Because she was the person on  
duty and I think she checked that information out.

Q. Doctor, I see no indication from  
the chart that there was any call for a dig level to  
be taken at autopsy?

A. No.

Q. Other than Dr. Rose, to your  
knowledge did any cardiologist or Cardiac Fellow,



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2

Cardiology Fellow, raise any question about the cause of Colleen Warner's death?

3

4

A. No, I don't think so. I don't believe that I heard any comments of that nature.

5

6

Q. Did you subsequently become aware of any digoxin levels obtained on assay of any postmortem blood or tissue of this child?

7

8

A. I am not sure that I did. I don't recall.

9

10

Q. In your judgment, Doctor, what was the probable cause of Colleen Warner's death?

11

12

A. I think the cause of death was due to the heart disease that she had.

13

14

Q. You say due to the heart disease. How would that have caused the death in the manner in which the death occurred?

15

16

A. Anyone who had severe malformation of the heart can die in exactly the manner that that baby died. Irregular heart action, bradycardia, everything.

19

20

Q. And you are satisfied I take it, Doctor, that the manner of her dying is fully consistent with the anatomical and clinical condition of the child?

21

22

23

A. I think that was the case.

24

25









GG.6

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MR. LAMEK: Mr. Commissioner, I set  
out to cover five of these charts today.

4

THE COMMISSIONER: Yes.

5

MR. LAMEK: I have done it. Can I  
try for another five tomorrow, please?

6

7

THE COMMISSIONER: Yes. All right.  
Well, I suppose we should give you appropriate credit.

8

9

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11

MR. LAMEK: Yes. I think if I may,  
Mr. Commissioner, while Dr. Rowe is still in the box,  
if we might mark some further records so they can  
be distributed to counsel.

12

13

Q. Dr. Rowe, I am showing to you  
what I think to be a copy of the Hospital's record  
of Jordan Hines.

14

15

Can you so identify it for me, please?

16

A. This is the Hospital record of  
Jordan Hines.

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MR. LAMEK: Thank you. Is that 103?

18

THE REGISTRAR: 103.

19

--- EXHIBIT NO. 103: Medical Records of  
Jordan Hines.

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MR. LAMEK: Q. Next, a copy of the  
Hospital's record for David Leith.

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A. That is the Hospital record for  
David Leith.

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MR. LAMEK: Thank you. 104, please,  
Mr. Commissioner?

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GG.7

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THE COMMISSIONER: 104.

--- EXHIBIT NO. 104: Medical Records of  
David Leith.

MR. LAMEK: Q Next, the Hospital  
record for Barbara Gionas.

A. That is the Hospital record  
for Barbara Gionas.

MR. LAMEK: Thank you.

THE COMMISSIONER: 105.

--- EXHIBIT NO. 105: Medical Records of  
Barbara Gionas.

MR. LAMEK: Q And last, the Hospital's  
record for Kevin Pacsai.

A. That is the Hospital record for  
Kevin Pacsai.

MR. LAMEK: Thank you very much. 106,  
please, Mr. Commissioner?

THE COMMISSIONER: Exhibit 106.

--- EXHIBIT NO. 106: Medical Records of  
Kevin Pacsai.

MR. LAMEK: Thank you, Dr. Rowe.

THE COMMISSIONER: Is that all then?  
Until 10 o'clock tomorrow morning then.

MR. LAMEK: Thank you, sir.

--- Whereupon the Hearing was adjourned until  
Wednesday, July 27th, 1983 at 10:00 a.m.





